

1.0 PURPOSE AND NEED

1.1 INTRODUCTION

In compliance with the National Environmental Policy Act (NEPA) and other relevant federal laws and regulations, the U.S. Forest Service (USFS) has prepared this Final Environmental Impact Statement (FEIS) to analyze the proposed Master Development Plan (MDP) for Crystal Mountain Ski Area. This FEIS includes changes from the Crystal Mountain DEIS made in response to comments from the public, government agencies, local Tribes, and USFS reviewers. Additional revisions to the Crystal Mountain FEIS were made to include updated analysis data and changes in government agency laws and guidance that have occurred since the publication of the DEIS. All new tables that were added to the Crystal Mountain FEIS are identified by the section number they occur in, followed by the term “FEIS”. Some of the tables that were included in the DEIS have been removed due to changes in pertinent laws and reporting requirements, these tables are identified in the list of tables that follows the Table of Contents.

Crystal Mountain operates under a Special Use Permit (SUP) issued by the USFS. When the SUP was issued to Crystal Mountain in 1992, one of the conditions in the permit was that Crystal Mountain would develop a new MDP, as Crystal Mountain had proposed several projects that were not included in their current 1983 MDP. In addition, a long range vision of the ski area was needed.

This FEIS follows the format established by the Council on Environmental Quality (CEQ) (40 Code of Federal Regulations [CFR], 1500-1508). This FEIS is designed to:

- Inform the public of the ***Proposed Action*** and the alternatives to the Proposed Action;
- Disclose the direct, indirect, and cumulative environmental effects of the Proposed Action and the alternatives to the Proposed Action; and
- Indicate any irreversible commitment of resources that could result from each alternative.

1.1.1 BACKGROUND

Crystal Mountain is situated in the Cascade Mountain Range of western Washington, adjacent to Mount Rainier National Park (MRNP), approximately 35 miles southeast of Enumclaw, Washington (Figure 1.1.1-1 in Volume 3). Located on the Snoqualmie Ranger District (SNOQRD) of the Mt. Baker-Snoqualmie National Forest (MBSNF), Crystal Mountain is accessed during the winter via State Route 410 (SR 410) and Crystal Mountain Forest Highway (Pierce County Road 97810). State highways 162, 164, and 169 feed into SR 410 in Enumclaw, and during the summer months, highways US 12 and SR 123 feed into SR 410 south of Crystal Mountain.

The Crystal Mountain SUP area originally encompassed approximately 4,900 acres. On April 3, 1992, the Crystal Mountain SUP was reissued and the area of the SUP was reduced to

approximately 4,350 acres¹, due to the relinquishment of a 550-acre parcel of land by Crystal Mountain. The 550-acre parcel² was removed from the northeast portion of the original Crystal Mountain SUP area in view of Crystal Mountain's future goals, which gave no short- or long-term consideration for lift and trail construction in this area.

Crystal Mountain encourages a range of recreation activities/opportunities throughout the year, such as photography, sight-seeing, RV and backcountry camping, wildlife viewing, and spa and fitness facilities. Hiking, horse-back riding, mountain biking, and chairlift rides, combined with viewing Mt. Rainier, are the primary summer activities. Conference facilities are also available in summer. The resort experiences the highest use during the winter months, with skiing³ as the primary activity. *Lift-served* and *hike-to backcountry skiing*⁴ in *off-piste* ski terrain also occurs in the SUP area. Over the past 5 years, skier visits have averaged roughly 300,000 annually, while summer use typically ranges from about 20,000 - 35,000 visits, including 15,000 - 20,000 lift rides to the summit of Crystal Mountain (Bill Steel, Pers. Comm., 2000). During the 1999-2000 season, Crystal Mountain experienced an increase in visitation of roughly 15 percent on a per day basis, recording the highest single day use ever on January 15th, 2000, totaling 9,696 skier visits. For the month of January 2000, visitation at Crystal Mountain was up by approximately 16 percent over January 1999 (Bill Steel, Pers. Comm., 2000).

The surrounding mountain environment and proximity to the Puget Sound region support year-round visitation to Crystal Mountain. Crystal Mountain contributes significantly to the rural economies of Greenwater, Enumclaw and surrounding plateau communities. While Crystal Mountain primarily serves day-use guests, it is one of the few resorts in the Northwest with overnight lodging (i.e. hotel, condominium, ski clubs) and private residences (i.e. Gold Hill) near the base area and within a comfortable walking distance of the chairlifts.

Crystal Mountain's local, regional, and destination market competition primarily includes Washington State areas such as The Summit at Snoqualmie, Stevens Pass, White Pass, Mission Ridge, Mount Baker, Whistler/Blackcomb Resort in British Columbia, the Mount Hood ski facilities, and Mount Bachelor in Oregon.

¹ The current SUP indicates that the permit area is 4,350 acres, however GIS analysis indicates the actual area of the SUP is 4,488 acres. The permitted SUP area (4,350 acres) is used throughout the text portions of this FEIS, while the GIS-derived SUP area (4,488 acres) was used for all GIS analysis and data tables within this FEIS. The biological resource tables (Chapters 3 and 4) report an SUP area that range from 4,486 to 4490 acres, due to rounding.

² The Land Allocation for the 550-acre parcel has not yet been revised from the original designation of Management Area 3C (developed recreation-winter sports). According to the SUP, the relinquished parcel is approximately 550-acres in size, but GIS analysis indicates that the actual area of the relinquished parcel is approximately 570 acres.

³ For the purposes of this FEIS, the terms "skiing" and "skier" see all snow sliding sports typically associated with ski area facilities, such as snowboarding, telemark skiing, cross-country, alpine skiing, etc.

⁴ Backcountry skiers are those skiers that utilize the lift-served and hike-to off-piste ski terrain in the Crystal Mountain SUP area. The term *off-piste* is used to describe skiable terrain that is not associated with the formal trail network, and typically includes gladed, open-bowl, chute, and other advanced to expert terrain types. *Lift-served backcountry skiing* can be defined as skiing the off-piste terrain that is not directly serviced by a chairlift system, but is a short hike or traverse from the chairlift. *Hike-to backcountry skiing* involves hiking to remote off-piste terrain without the aid of a chairlift system to gain elevation.

1.1.2 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1.2.1 Overview

This FEIS responds to the proposal, by Crystal Mountain to upgrade and expand the infrastructure and associated facilities within the existing SUP boundary. The purpose of this proposal is to update the Crystal Mountain MDP for the long range (10 to 15 years) management and development of Crystal Mountain. The purpose for the MDP proposal is to maintain and/or take advantage of opportunities to restore the condition of the Silver Creek watershed, to provide facilities necessary for an enjoyable year-round recreation experience, to ensure the long-term economic viability of Crystal Mountain, and to be consistent with the direction in the *Mt. Baker-Snoqualmie National Forest Land and Resource Management Plan* (U.S. Department of Agriculture [USDA], 1990a), as Amended by the *Record of Decision (ROD) for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl* (USDA, U. S. Department of the Interior [USDI], 1994). The two plans will be referred to as “Forest Plan, as Amended.”⁵

The FEIS also responds to the need to amend the 1990 Forest Plan to reallocate an approximately 550-acre parcel of land, which was included in the Crystal Mountain SUP area prior to April 3, 1992. Prior to the issuance of a new SUP, the 550-acre parcel was allocated as **Management Area 3C (MA 3C) developed recreation-winter sports**. The current and future land use within the 550-acre parcel is not considered “developed recreation”, therefore the current allocation no longer applies.

1.1.2.2 The Proposed Action

Crystal Mountain has submitted the *Crystal Mountain Master Development Plan, August 1998* (Sno.engineering, 1998) for review and approval by the USFS. Figure 1.1.2-1 depicts Crystal Mountain’s Proposed Action. The MDP includes the replacement and addition of chair and surface lifts, construction of an aerial tram, lift access to terrain within the SUP boundary that is currently not served by chairlifts, the expansion of night skiing, and expansion of the snowmaking system. In addition, the MDP includes the addition of new parking areas, construction of new and expanded day lodges, development of additional overnight lodging and other related facilities, construction of new employee housing, a new wastewater treatment facility, and other utilities to support year-round recreation use. Finally, to help sustain the improving trend in the condition of the Silver Creek watershed, the MDP includes the *Draft Final Conceptual Stormwater Management Plan* (Golder Associates, 2000b), watershed restoration projects as identified in the *Silver Creek Watershed Condition Assessment* (Jones & Stokes Associates, 1997) and the *Watershed Restoration Plan for Crystal Mountain Master Development Plan* (Jones & Stokes Associates, 2001a).

⁵ The term “Forest Plan, as Amended” refers to the 1990 *Mt. Baker-Snoqualmie National Forest Land and Resource Management Plan*, as Amended by the *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl* (USDA, 1990a; USDA, USDI, 1994). The term “Northwest Forest Plan” refers to the 1994 ROD (USDA, USDI, 1994). The term “1990 Forest Plan” is used to refer specifically to the *Mt. Baker-Snoqualmie National Forest Land and Resource Management Plan* (USDA, 1990a).

Implementation of the Proposed Action would increase the year-round recreational opportunities within the existing Crystal Mountain SUP boundary. The ***Comfortable Carrying Capacity*** (CCC)⁶ of Crystal Mountain would increase from 7,460 to 11,020, including backcountry skiers under the proposal. Accordingly, the ***peak day capacity***⁷ of Crystal Mountain would increase from the existing 8,206 Persons-At-One-Time (PAOT) to 12,122 PAOT. The Proposed Action would increase annual summer visitation from approximately 35,000 to an estimated 90,000 to 120,000 annual summer visits over a 5 to 10 year period.

Table 1.1.2-1 shows the existing and proposed capacities at Crystal Mountain. The specific improvements proposed in the Crystal Mountain MDP are outlined below.

⁶ The ***Comfortable Carrying Capacity*** of a mountain resort is the number of skiers an entire resort can comfortably accommodate at any given time and still guarantee a pleasant recreation experience. A resort's CCC does not reflect the number of skiers on the mountain at one time. Generally, 70 to 85 percent of a mountain's total CCC would be active skiers, including those on the trails, riding lifts, and waiting in lift lines. The remaining 15 to 30 percent would be using guest service facilities or milling in areas near these facilities.

⁷ The ***peak day capacity*** (110 percent of the CCC) is used to help design more critical aspects of the mountain resort (i.e. sewer system, water treatment and storage capacity, etc.) during peak visitation periods (10-15 days/year). It is common for ski areas to exceed their CCC during peak visitation times throughout the year (i.e. Thanksgiving, Christmas, New Years, etc.).

**Table 1.1.2–1
Crystal Mountain Existing Facilities And Proposed Action**

Master Plan Components	Existing	Proposed
Alpine Ski Area Capacity (CCC)^a	7,460	11,020
Lift/Trail Capacity (SAOT) ^b	7,120	10,990
Backcountry Capacity in SUP (SAOT) ^c	340	30
Design Peak Day Capacity (PAOT) ^d	7,865	12,122
USFS Special Use Permit Area (acres)	4,488	4,488
Lifts		
Total Number of Lifts	9	19
Chairlift	9	16
Surface Tows	0	2
Tram	0	1
Trails		
Number of Trails	54	86
Formal Terrain (acres)	450.2	696.6
Beginner	12.5	17.4
Novice	50.9	57.4
Low Intermediate	22.7	35.2
Intermediate	181.3	252.5
Advanced Intermediate	2.3	40.7
Expert	180.5	293.4
Night Skiing		
Number of Trails	5	22
Available Terrain (acres)	62.6	205.7
Capacity (skiers)	1,720	5,120
Snowmaking		
Number of Trails	1	32
Terrain (acres)	30	253.9
Overnight Visitor Capacity (pillows)	729	1,419
Parking		
Number of Parking Areas	6	12
Total Parking Provided (acres)	21.6	34.4
Mountain Work Roads (miles)^e	18.7	17.0
Maintenance Facilities (square feet)	15,681	18,239
Employee Housing Capacity (pillows)	85	285
Restaurant Seats	1,382	3,149

^aCCC = Comfortable Carrying Capacity

^bSAOT = Skiers-at-one-time. These numbers reflect potential skier numbers and do not reflect visitation.

^cBackcountry SAOT breakdown as follows: lift-served backcountry includes South Country-100, North Country-200, Other-30; hike-to backcountry includes East Peak-10.

^dPAOT = People-at-one-time

^eIncludes unpaved roads as described in Section 3.2.2, see Table 3.2.2-3

Lift Replacement

The existing C-4 (*Quicksilver*) would be replaced with a detachable chairlift that would provide an uphill capacity of 2,600 **persons per hour** (pph). In conjunction with trail improvements, the lift would be realigned and extended to optimize existing terrain for novice to intermediate level skiers.

The existing C-8 (*Discovery*) would be replaced with a detachable chairlift that would provide an uphill capacity of 2,400 pph. The lift would be realigned and extended, optimizing beginner terrain and enhancing *out-of-base capacity*.

New Lifts

The proposed T-1 (*Summit Tram*) would be installed in the vicinity of the existing base area day lodge, and would terminate at the upper terminal of C-10 (*Rainier Express*), providing access to the summit of Crystal Mountain, with an uphill capacity of 837 pph with two 100-passenger cabins.

The proposed C-2 (*Snorting Elk*) chairlift and associated trails would balance uphill capacity with available ski terrain within the Green Valley/Snorting Elk areas, as well as help meet demand for access to the North Country and proposed C-14 (*Morning Glory Express*) ski pod.

The proposed C-5 (*Silver King*) would access expert terrain and *off-piste* terrain in the South Country within the current SUP area, including Avalanche Basin and Silver Basin.

The proposed C-12 (*Park `n Ride*) chairlift would provide conveyance from the proposed Bullion Basin Base Area to the existing Upper Base Area for all skiers. The associated trail (12A) would add terrain for beginner skiers, as well as egress for skiers returning to the Bullion Basin Base Area and parking/shuttle services.

The proposed C-13 (*Kelly's Gap Express*) chairlift would provide wind-sheltered, out-of-base access from the proposed Bullion Basin Base Area to the upper mountain for intermediate through advanced level skiers.

The proposed C-14 (*Morning Glory Express*) would access expert and off-piste terrain in the North Country, within the existing SUP boundary.

The proposed C-15 (*Bullion Basin Express*) chairlift would provide out-of-base conveyance from the proposed Bullion Basin Base Area day lodge. C-15 would access the proposed C-16 (*East Peak*) chairlift and add terrain for low-intermediate to advanced-intermediate level skiers. This lift would replace a lift originally installed in Bullion Basin in 1974, which was moved to its current location as C-7 (*Gold Hills*) in 1983.

The proposed C-16 (*East Peak*) would access expert and off-piste terrain within the eastern portion of the current SUP area.

The proposed S-1 (*Ptarmigan*) surface lift would convey guests from the existing Base Lodge area to Trail 12A (*Park `n Ride Skiway*), providing a skiable connection to the Bullion Basin Base Area. S-1 would also provide additional round-trip novice terrain.

The proposed S-2 (*Pika*) surface lift would provide learning terrain for first-time beginners in the immediate vicinity of the proposed Bullion Basin Base Area.

Snowmaking

Snowmaking capability at Crystal Mountain would be expanded from 30 acres to approximately 254 acres of coverage, including all beginner terrain and all novice to intermediate terrain served by C-7 (*Gold Hills*), C-8 (*Discovery Express*), C-4 (*Quicksilver Express*), C-9 (*Forest Queen Express*), C-11 (*Chinook Express*), and the proposed C-15 (*Bullion Basin*) and C-12 (*Park 'n Ride*) chairlifts. The expanded snowmaking would also include advanced/expert terrain served by the existing C-1 (*Miner's Basin*) lift, Trail 13B (*Kelly's Gap Road*) from the bottom terminal of C-3 (*Green Valley Express*), and Trail 13F (*Northway Return*) from the base of the proposed C-14 (*Morning Glory Express*) lift.

Skier Support Facilities

In the Upper Base Area, the proposed Skier Services Building would provide additional space for arrival services such as lockers, retail, restrooms, ski school, day care, chapel, and administration. A retreat center would be constructed proximate to the Summit House, providing views of Mt. Rainier. In combination with the reconfiguration of the existing Silver Creek Day Lodge, the Upper Base Area would be designed to meet the arrival needs of visitors parking in the upper lot, those arriving by shuttle, and those staying in nearby public overnight accommodations.

The proposed Bullion Basin Base Area would provide the primary portal to mountain facilities, including all staging functions (i.e. tickets, rentals, ski school, restaurant, lockers, etc.). This portal would be designed to provide a significant amount of walk-to parking (over 17 acres), enhance visitor convenience and reduce shuttle system demand. In combination, the expanded Upper Base Area facilities and the proposed Bullion Basin Base Area facilities would be sized to accommodate the arrival/departure needs of 11,020 skiing guests at build-out, greatly improving out-of-base access to upper mountain facilities and reducing base area congestion.

Day lodge/food service facilities would be expanded and developed to meet industry standards, as described in the MDP, and visitor expectations, as discussed in Chapters 3 and 4. Furthermore, the new facilities would comply with the Americans with Disabilities Act (ADA), comfortably accommodating up to 11,020 skiing guests at build-out. Day lodge/food service facilities would be located proximate to popular lifts and would be sized to meet expected demand associated with various ski pods. Existing and proposed day lodge/food service expansions/development include: Upper Base Area - 1,283 seats (existing), Bullion Basin Base Area - 525 seats, High Campbell Restaurant (previously approved) - 500 seats, Summit House Restaurant - 500 seats (previously approved), and Green Valley Restaurant - 341 seats.

The MDP proposal includes the construction of a mountain-top retreat center, which would be accessed via the proposed tram. A chapel would also be located within the proposed guest services building.

Other Recreation Amenities

In addition to the scenic ride and on-mountain dining opportunities afforded by the proposed Summit Tram, Crystal Mountain would donate space in the new Summit House specifically for the development of an interpretive center. An ADA-accessible interpretive/recreation trail and an alpine garden would be also constructed in the immediate vicinity of the Summit House.

Guest Accommodations and Convention Facilities

ADA-accessible overnight accommodations would be expanded in order to meet the current and expected winter demand, summer demand associated with MRNP and other mountain environment visitors, and to address the increased mountain capacity. The Alpine Inn, owned and operated by Snorting Elk LLC., would be expanded from 37 to 167 rooms, along with the development of an outdoor skating rink, café, and conference facility. A new 100 - room hotel with a restaurant, commercial space and conference facilities would be constructed to the immediate south of the Silver Skis condominiums. To serve the needs of overnight guests, commercial space would also be located in the Summit Tram lower terminal building.

Employee Housing

Two ADA-accessible employee housing complexes (one dormitory complex and one complex consisting of duplex units) are proposed to replace and expand upon the existing facilities. A total of 285 pillows would be provided in order to meet Crystal Mountain's key operational requirements during the winter, particularly during a storm event.

Parking and Shuttles

The proposed Bullion Basin Base Area would occupy approximately 4.35 acres of existing parking. In order to accommodate parking needs of the proposed MDP at build-out, approximately 17 acres of additional parking would be necessary. Egress routes from the parking lots to the base area and associated facilities would be ADA accessible.

RV Camping

A total of 125 ADA-accessible RV camping spaces would be developed in the northern portion of Parking Lot F and offered year-round on a first-come, first-serve basis. RV hook-ups would be equipped with electricity, water, and sanitation service.

Patrol/First-Aid Facilities

The existing first aid room, radio room, director's office, patrol lockers, and patrol storage facilities in the existing Main Lodge would be relocated to the new Bullion Basin Base Area lodge. Addition of new patrol facilities in the Bullion Basin Base Area, coupled with the reduction in facilities at the upper base area, would result in a net base area expansion of approximately 1,900 square-feet.

With replacement of C-4 (*Quicksilver*), the Quicksilver ski patrol duty station would be replaced and incorporated into the new upper terminal. With reconstruction of the Summit House, the Summit House duty station would be expanded from about 120 square-feet to about 700 square-feet. Additional on-mountain duty stations would be located near the top terminals of the chairlifts in the following locations: East Peak 750 square-feet, Bullion Basin 400 square-feet, Silver King 400 square-feet, Snorting Elk 400 square-feet, and Morning Glory 400 square-feet.

Maintenance

Crystal Mountain's vehicle maintenance shop would be expanded from 4,800 square-feet to about 8,400 square-feet in order to remedy the current shortage of vehicle maintenance space, as well as to accommodate the maintenance needs of a larger grooming fleet.

Utilities

Five groundwater wells (estimated combined flow of 500-gallons per minute [gpm]) would be developed, and when combined with existing and additional water rights associated with Silver, Elizabeth, and Bullion Creeks, would meet Crystal Mountain's needs for future domestic water, fire protection, snowmaking, and irrigation. All existing and proposed base area facilities associated with Crystal Mountain would be connected to a new water reclamation facility. Providing tertiary treatment, reclaimed water from the facility would be utilized for snowmaking in winter and irrigation in summer. The existing wastewater treatment plant would be decommissioned. All proposed on-mountain restaurants (Summit House and Green Valley) would have separate septic tank/drainfield systems.

In order to meet expected electrical power demand in the short-term and with expansion proposed under the MDP, the transformer bank at the Greenwater Substation would be increased to a 12 megawatt (mw) transformer. A second 12.5 kilovolt (kv) to 34.5 kv, 7.5 mw step-up transformer would also be installed. Overall, the proposed electrical capacity to the greater Crystal Mountain area would be increased from 4.5 mw to 11 mw.

The Emergency Power Plant would be expanded to include a second, 12.5 kv to 34.5 kv, 7.5 mw transformer. The existing power line from the Emergency Power Plant to Crystal's metering pole would be upgraded to Puget Sound Energy's standard "feeder" circuit wire size and installed underground.

Watershed Restoration

To ensure consistency with the Forest Plan, as Amended, Crystal Mountain would implement a variety of watershed restoration projects. The proposed watershed restoration projects include: the *Watershed Restoration Plan for Crystal Mountain Master Development Plan* (Jones & Stokes Associates, 2001a; Appendix C), *Monitoring Framework Plan for Crystal Mountain Master Development Plan* (Jones & Stokes Associates, 2001b; Appendix D), *Road Management Plan for Crystal Mountain Master Development Plan* (Jones & Stokes Associates, 2001c; Appendix E), *Draft Final Conceptual Stormwater Management Plan* (Golder Associates, 2000b; Appendix M), and the *Crystal Mountain Master Development Plan* (Sno.engineering, 1998).

Forest Plan Amendment

The Proposed Action includes a non-significant (under the National Forest Management Act - NFMA) Forest Plan amendment, to reallocate approximately 550 acres from Administratively Withdrawn ***MA 3C - Developed Recreation, Winter Sports*** to Administratively Withdrawn ***MA 1B – Dispersed Recreation - Semi-primitive, Non Motorized*** (see Section 1.2.2-Forest Plan Management Direction and Land Allocation).

1.1.2.3 Purpose and Need

The purpose for the MDP proposal is two fold: 1) provide facilities necessary for an enjoyable year-round recreation experience, which will ensure long-term economic viability of Crystal Mountain by maintaining the competitive position of Crystal Mountain with other ski areas in the local and regional market; and 2) maintain and/or take advantage of opportunities to restore the condition of the Silver Creek watershed and be consistent with the direction in the Forest Plan, as Amended.

The Forest Service elements of the purpose and need focus on maintaining and/or enhancing environmental resources and providing the public quality recreational opportunities in a natural outdoor setting on NFS lands. The basis for accomplishing this is contained in federal laws and Forest Service policy directives, the Forest Plan, as Amended and the Crystal Mountain SUP. These laws and documents also provide the Forest Service the authority and direction pertaining to ski area management on NFS lands.

Crystal Mountain's project-specific elements of the Purpose and Need focus on improving the quality and balance of existing skier facilities necessary for an enjoyable skiing experience, providing the facilities and amenities to satisfy projected increases in demand, and to create a year-round recreation experience. The Proposed Action would accomplish these elements by improving upon existing shortcomings at the ski resort, in order to meet current winter and summer guest expectations for a quality recreation experience. The Proposed Action would position Crystal Mountain to take advantage of potential future growth in the local and regional skier markets. This, in turn, would allow the ski resort to remain competitively viable within their market niche in the long-term.

Although the Forest Service and Crystal Mountain contribute individual elements to the Purpose and Need for the Proposed Action, they are connected through a committed long-term partnership to provide quality recreation opportunities on NFS lands. By satisfying their current and future visitors, Crystal Mountain would remain a healthy and competitive ski resort. This would help fulfill Forest Service policy, objectives, and management direction for ski areas as outlined on pages 4-182 and 4-183 of the in the 1990 Forest Plan (Management Area 3C).

The Proposed Action includes various projects to address these connected Purpose and Need elements, including consistency with the Forest Plan, as Amended, opportunities for watershed restoration, and the shortcomings at Crystal Mountain. These purpose and need elements are further elaborated in the following sections.

There is a need to reduce the congestion that occurs in the base area, where skiers and other site visitors often congregate.

Currently, up to 7,120 guests per day funnel through the existing base area facility. Due to physical constraints and facility limitations, base area congestion often occurs, which diminishes the efficiency of *out-of-base* access, and ultimately reduces the amount of time spent on the mountain. The linear nature of the Silver Creek valley allows for only approximately 25 percent of Crystal Mountain guests to park within a comfortable walking distance of key base area facilities such as ticketing, food service, rental services and restrooms. A survey undertaken in January 1996, found that Crystal Mountain shareholders (250 respondents) were particularly dissatisfied with the location, size, and wait times for food service at Crystal Mountain (University of Washington EMBA, 1996). Roughly 90 percent of Crystal Mountain's total food service seats are concentrated in the existing base area, instead of at locations that are more proximate to popular lifts.

Skier congestion occurs along the main trails in the vicinity of the base area (e.g. Trails 4A, 1A, and 3H) due to the limited number and size of ski trails that connect the upper mountain with the base area. Skier congestion along these trails is exacerbated when skiers located in the upper mountain and lower mountain descend to the base area at the same time for meals and to leave the ski area. The increased congestion along base area ski trails can detract from the recreation experience because high skier densities and mixed ability levels can lead to skier conflicts.

The base area congestion and linear parking lot alignment under the current conditions detract from a quality recreational experience, as guests are required to spend additional time walking from parking areas or waiting in the congested base area for food service seating. With national and local market data indicating that there is an ever-increasing level of customer awareness of quality, service, and value in the ski experience, improvements are needed to increase circulation within the base area and dispersal of skiers throughout the resort. Maintenance of customer satisfaction in these areas would better ensure visitation, thereby allowing Crystal Mountain to maintain economic viability and its competitive position relative to other Puget Sound ski areas.

There is a need to update current facilities, which are below ski industry standards.

Long-Term Planning

As discussed in Chapter 3 (see Section 3.3.2-Recreation), review and analysis of the relevant national and local market data indicate that there is an ever-increasing level of customer awareness of quality, service, and value in the ski experience (University of Washington EMBA, 1996; RRC Associates, 1994a, 1996, 1997, and 1998; and Leisure Trends, 1996). Progressive ski areas ranging from high-profile destination resorts such as Vail, Breckenridge, Sun Valley, Whistler, and Park City, to regional/local, day-use ski areas including Timberline, Red Lodge, Mt. Bachelor, Mt. Hood Meadows, and Bogus Basin have catered to the changing demands of the skier population. These ski areas have done this by providing convenient, quality accommodations, a heightened service orientation, a more refined and technologically improved ski experience, and numerous year-round recreational amenities. Similar to these examples, ski areas that have invested in faster and more comfortable ski lifts, snowmaking, terrain expansion,

increased trail grooming, and other quality improvements have created higher quality skiing, and have typically captured additional market share. These developments have also led to an overall improvement of service and a higher level of expectation among the skiing public, as stated in the Forest Plan EIS⁸ (USDA, 1990b, p. 3-168). Conversely, lack of improved facilities has led to the erosion of market share and eventually a decline in skier visit performance. The need for improvements at Crystal Mountain is demonstrated by the stagnation of skier visitation to Crystal Mountain over the past decade and evidence of significant export of skier visits to other ski resorts, particularly outside the state, despite substantial population growth in the local market area. The demand for skiing within the Pacific Northwest was demonstrated by an increase of skier visits at Crystal Mountain by roughly 15 percent during the 1999/00 ski season, as compared to the 1998/99 ski season. Increase in visitation is believed to be a result of low snow accumulation in the Rocky Mountain region (see Section 3.3.2-Recreation).

Presently, Crystal Mountain is deficient in several areas, including the balance of skier services versus lift and trail capacities, base area and on-mountain circulation and dispersal of guests, terrain distribution, and lack of on-mountain services (Sno.engineering, 1998). With the purchase of Crystal Mountain by Boyne USA Resorts, Inc. in March 1997, Crystal Mountain implemented several of the remaining projects from the previous 1983 Master Plan (Sno.engineering, 1983), as well as site specific projects that were approved under Environmental Assessments (EA), in an effort to meet the demonstrated public demand for better service and a higher quality skiing experience at Crystal Mountain. With the installation of these new facilities, Crystal Mountain has retained sufficient market share to remain competitive in the short term. No long-term plan exists, however, for Boyne USA Resorts, Inc. to evaluate the economic viability of Crystal Mountain relative to the changing skier market and competing regional ski areas. The 1983 MDP and approved site-specific projects represent the current limits of the Crystal Mountain improvement/expansion strategy, therefore, the updated Crystal MDP would provide the framework for addressing the existing deficiencies and the long-term management and development at Crystal Mountain over the next 10 to 15 years. Accordingly, the Crystal Mountain MDP would provide the basis for the economic strength of the Crystal Mountain operation over this period.

Crystal Mountain competes with other ski areas in the local and regional marketplace, the majority of which have recently made, or are in the process of undertaking substantial facilities improvements. The Crystal Mountain MDP would provide the basis for long-term improvements at Crystal Mountain, allowing for the resort to remain competitive at the regional and local level. On this basis, improvements to the existing facilities are necessary for Crystal Mountain to remain competitive in the local/regional marketplace, as well as help keep skier visits within the state.

Public Lodging

The public lodging inventory at Crystal Mountain is largely comprised of wood-frame structures with small under-appointed rooms and minimal services. These facilities are generally well below the standard of resort destinations in the Pacific Northwest marketplace, such as Mt. Bachelor or Whistler. In addition, 10 percent of Crystal Mountain's current capacity can be

⁸ The term "Forest Plan EIS" is used to refer specifically to the EIS prepared for the Forest Plan.

accommodated in overnight public beds in the vicinity of the base area. The existing accommodations at Crystal Mountain also lack appropriate conference facilities and are not conducive to summertime use. With the existing summer visitation at approximately 20,000 visitors, compared to winter visitation of over 300,000, revenues are not available to Crystal Mountain for the purposes of addressing fixed costs during the summer.

Based on the 1993/94 RRC survey (RRC Associates, 1994), approximately 28 percent of Crystal Mountain's skiers feel that improved accommodations are important to very important (i.e. 4 or 5 on 5-point scale). As stated in the 1990 Forest Plan EIS, evidence suggests that Cascade ski areas suffer a competitive disadvantage to the Rockies, based on the inability to offer overnight accommodations (USDA, 1990b, p. 3-169). 1990 Forest Plan direction further anticipates the need for upgrading and expansion on the basis of public need, including development focused on "enhancing overnight and mid-week resort opportunities" (USDA, 1990a, p. 20).

Upgrading and/or expansion of the lodging facilities at Crystal Mountain are needed to increase the quality of the accommodations and the number of rooms available to the public. By including conference facilities into the hotel/complex, the need for summer visitation would be addressed. Expansion of overnight accommodations at Crystal Mountain would allow the ski area to provide higher quality lodging. Expansion of hotel facilities would also allow for Crystal Mountain to better meet the winter demand for lodging, as well as the summer opportunities for overnight lodging associated with visitors to MRNP and other local visitors. By including conference space in the expansion, Crystal Mountain would have the opportunity to attract additional summertime and shoulder season business visitors. The increase in summer and shoulder season revenues would allow Crystal Mountain to offset a portion of the fixed costs that must be met during the non-skiing seasons.

There is a need to balance the capacities of skier service facilities with lift and trail capacities.

Access to the Upper Mountain

Crystal Mountain's current access to extensive upper mountain terrain is inadequate (Sno.engineering, 1998). The increasing popularity of snowboarding and recent development of parabolic and "fat" all-terrain skis has placed new and growing demand for more challenging *off-piste* terrain. High and increasing demand for expert terrain at Alta, Snowbird, Jackson Hole, and Taos provides evidence of this trend, as does recent lift-served expert open bowl and gladed terrain expansions at Vail, Steamboat, Big Sky, and Telluride. Crystal Mountain exhibits the greatest amount of significant challenging terrain within its existing SUP area when compared to the other ski areas serving the Puget Sound market. However, due to hiking requirements to access these areas and/or low gradient run-out characteristics, much of this terrain is underutilized or inaccessible to a large percentage of potential users, including snowboarders and disabled skiers. The addition of lift capacity from the base area to the upper mountain is needed to facilitate skier access to the extensive, under-utilized terrain at higher elevations within the existing SUP (e.g. North Country, South Country East Peak). Improved *out-of-base* access is needed to reduce skier congestion along existing ski trails in the vicinity of the current base area (e.g. Trails 4A, 1A, and 3H). Additional ski trails are also needed to link the upper mountain

with the base facilities to better separate skiers of varying ability levels. The instillation of lifts and trails to improve *out-of-base* access would help meet these needs.

Distribution of Terrain

Crystal Mountain currently exhibits a shortage of low intermediate and advanced intermediate terrain when compared to ski industry averages, which represent expected skier demand by ability level (Sno.engineering, 1998). As a result, there is a need to better balance Crystal Mountain's ski terrain within the existing SUP to meet expected skier demand by ability level, particularly for the low- and advanced-intermediate skiers. For example, intermediate level terrain in the *Green Valley Express* pod is currently limited by congested or narrow egress routes (e.g. Trails 3H, 10A, and 10J) that discourage intermediate skiers from using this ski pod. Crystal Mountain has a need for additional low- and advanced-intermediate level terrain. The addition of lift service and new low intermediate and advanced intermediate trails would address this need.

Guest Services/Building Space

Visitor service capacity (i.e. day lodge, restaurant, bar, equipment/locker rentals, day care, etc.) at Crystal Mountain is in short supply, overall representing about 55 percent of standard design criteria and industry averages for a resort of Crystal Mountain's size, market orientation and capacity (Sno.engineering, 1998). Additional space is needed to balance with the capacities of the lifts and terrain. In addition, many of the existing buildings do not fully comply with the ADA. The need to provide additional visitor service capacity would be met through the expansion of existing visitor facilities and/or construction of new visitor services buildings in balance with the visitor capacity at Crystal Mountain. There is a need to retro-fit the existing facilities and design any new guest service facilities to meet the requirements of ADA.

The existing chapel is located in key base area space that is needed to efficiently serve visitors on a day to day basis. Relocation of the chapel to the proposed Skier Services Building would allow for more efficient use of the space in the base area where the existing chapel is located. Development of the proposed retreat center in a mountain-top location near the proposed Summit House would satisfy a current need for events such as wedding ceremonies, spiritual gatherings, etc. As evidenced by the financial success of the retreat center currently in use at Big Sky Ski Area in Montana, Crystal Mountain would benefit greatly from the use fees generated by the proposed retreat center at the summit.

Parking

Crystal Mountain has a parking deficit of 2.0 acres and the existing parking lots (21.6 acres) are sufficient to accommodate only 84 percent of the resort's current peak capacity. Due to the linear nature of the existing parking in the Silver Creek Valley and the presence of a single base area complex, approximately 5.6-acres of parking are within a comfortable walking distance of the base area facilities. The distance from the majority of parking areas to the base area places increased demand on the shuttle system, which currently experiences frequent stops, lengthening the time spent getting to and from the slopes, and significantly impacting both the first and last guest experiences at Crystal Mountain.

Crystal Mountain has a need for additional parking to accommodate the peak capacity. In addition, the ski area has a need for more base area facilities and for parking areas proximate to the base area. Additional parking areas and construction of base area facilities more central to the SUP area (i.e. closer to more parking lots than the existing base area) would meet these needs.

There is a need to improve the early season snow cover on novice to advanced terrain.

Snowmaking

From mid-November through mid-January, snow cover on the key beginner to intermediate terrain at Crystal Mountain is often limited, particularly below the 5,000-foot elevation during normal conditions and at all elevations during low snow years. Egress capacity from the base of C-3 (*Green Valley Express*) is often restricted by the lack of snow on trail 13B (*Kelly's Gap Road*). The inability to provide adequate beginner and intermediate level terrain during the early portion of the ski season limits Crystal Mountain's ability to attract guests during periods of low snow. Accordingly, financial viability of Crystal Mountain is affected by low snow conditions below the 5,000-foot elevation. There is a need for Crystal Mountain to augment natural snowfall during the early season and in low snow years. Expansion of the existing snowmaking infrastructure would meet this demand.

There is a need to increase ski area operating efficiency, which is currently below the desired optimum level.

Mountain-Top Operations

The considerable travel distance and the requirement to reach Crystal's summit by two access lifts inhibits the efficiency of facility maintenance, avalanche control, first-aid functions, food service and year-round use by the public. The lack of easy access to the summit also limits potential late spring/early summer skiing opportunities in Green Valley. In order to increase the efficiency of mountain-top operations, Crystal Mountain has a need for a more effective means to access the summit. Access to the summit during the late spring/early summer period, a time when snow may be lacking in the lower elevations, would also allow for skiing operations in the Green Valley area. The extended skier visitation in conjunction with year-round public access, would support Crystal Mountain's economic viability and bolster the competitive position relative to other local/regional ski areas.

Employee Housing

Crystal Mountain experiences difficulty attracting enough qualified winter employees to assure competent operation of the resort, in part due to lack of affordable housing that is reasonably proximate to the ski area. Employee accommodations (space for 85 employees) near the base area are insufficient to meet necessary Crystal Mountain operating requirements, particularly during storm events, when employees must commute in excess of one hour from Enumclaw, for early morning (opening) or late evening (closing) duties.

Under the proposed expansion, Crystal Mountain would have a need for approximately 350 employee housing units (pillows) in order to accommodate early morning, late evening and storm event duties. The expansion/addition of employee housing units would help to optimize the efficiency of opening and closing operations, as well as assist in controlling operating costs at Crystal Mountain.

Ski Patrol Duty Stations

While ski patrol coverage objectives for current operations are met with existing duty stations, several of the patrol facilities are undersized for the storage requirements placed on them. In order to meet patrol coverage requirements for the Proposed Action, expansion of existing duty stations and several additional duty stations would be necessary.

Maintenance Facilities

Though structurally in fair condition, the overall appearance of the maintenance complex is below standard and does not fully meet the intent of the Cascadian architectural theme, as prescribed by the 1990 Forest Plan. Crystal Mountain's existing vehicle maintenance shop is undersized by about 2,600 square-feet when compared to industry standards (Sno.engineering, 1998). The proposed expansion of groomed terrain would sponsor the need for additional grooming vehicles, which could not be properly accommodated in the existing facilities. The construction of additional maintenance facilities would address the need for additional space.

Utilities

Crystal Mountain's present water supply and water storage capacity are adequate to meet the resort's existing peak water demand. However, with the proposed up-mountain and base area development, expansion of the water system and additional water storage facilities would be necessary. The existing mechanical wastewater treatment facility at Crystal Mountain has reached its capacity and useful service life (Montgomery Watson, 1998). The capacity of the separate sewage treatment system for the Summit House (holding tank and seepage pit) is considered inadequate at existing demand levels. The proposed skier capacity expansion, additional visitor and employee lodging, and increased year-round use would sponsor increased wastewater flow. Modernization and expansion of the existing water supply and wastewater treatment facilities would increase the efficiency of the systems while meeting the need for additional water/wastewater treatment. Under the Proposed Action, the existing Summit House sewage treatment system would be upgraded in accordance with previously approved plans, and would remain separate from the main wastewater treatment facility at the base area.

Currently at capacity, Crystal Mountain's existing electrical power service (4.5 mw emanating from the Greenwater Substation) lacks the capacity to accommodate mountain and base area development proposed under the MDP proposal. The incidence of power outages (typically two to three times per season) during high wind and/or heavy snow events can significantly impact Crystal Mountain's financial viability. The Puget Sound Energy emergency backup power generation plant at Crystal Mountain is only large enough (2.5 mw) to service a portion of the existing facility and a small residential load in the base area. Expansion of the power service and

the emergency backup facility would address the need for sufficient capacity during both normal and inclement conditions.

Mountain Roads

In order to meet new lift construction, maintenance, and fire protection needs under the proposed MDP, additional mountain roads would be required. Specifically, Crystal Mountain would need to construct permanent roads to the upper terminals of the proposed C-8 (*Discovery Express*), C-4 (*Quicksilver*), C-14 (*Morning Glory Express*), and C-2 (*Snorting Elk*) lifts, as well as the lower terminal of C-5 (*Silver King*) and several additional permanent roads in order to increase the efficiency of the Crystal Mountain road network. In all, approximately 2.2 miles of additional permanent roads would be necessary under the proposed expansion.

There is a need to provide a convenient and quality recreation experience for all site visitors on a year-round basis.

Skier Abilities

Handicapped skiers or those unable to hike cannot access the high elevation terrain in the Crystal Mountain SUP area (i.e. Silver King, East Peak, Northway Peak). The installation of a tram(s) or lift(s) in these areas would allow access to areas within the SUP that are currently not accessible to handicapped skiers or those unable to hike.

Year-Round Recreation Opportunities

The summit of Crystal Mountain affords scenic views of Mount Rainier and the Cascade Range. While Crystal Mountain currently serves summer visitors wishing to view Mount Rainier through the use of two chairlifts and the Summit House restaurant, chairlift access to the summit is not appropriate for young children, elderly, or handicapped visitors. In addition, non-skiers currently cannot access the summit during the winter. Alternative (non-skiing) recreation amenities at Crystal Mountain for winter and summer visitors are limited, particularly for young children, elderly, and handicapped visitors. The inability to transport non-skiing guests to the summit reduces the access of the summit to the non-skiing public during the winter. The lack of summer use of the summit facilities is exacerbated by Crystal Mountain's inability to provide summit access to children, elderly, and handicapped visitors.

The lack of summer visitation, relative to the skiing season at Crystal Mountain affects the economic viability of the ski area during the non-skiing seasons. The installation of a tram would provide year-round access and facilities for all users, regardless of ability and would meet the needs of the public while helping to insure the economic viability of Crystal Mountain on a year-round basis.

Recreational Vehicle Camping

With the increase in summer visitation throughout the area, demand for RV camping at Crystal Mountain is expected to increase. However, aside from parking spaces and electrical hookups in

Parking Lot B, no specific facilities are currently available for RV campers. Accordingly, all RV units currently using the site must be self-contained, as the existing RV spaces do not provide water and sanitation service. With the upgrades and year-round visitation proposed in the MDP, Crystal Mountain would have a need to expand the offering of full-service RV camping opportunities to meet anticipated public demand and expectations. The expansion/construction of new RV camping areas with power, water and sanitation service would meet this need.

There is a need to maintain or improve the watershed condition by implementation of watershed restoration.

Meet Forest Plan Objectives

According to the Forest Plan, as Amended (USDA, 1990a; USDA, USDI, 1994), the lands within the Crystal Mountain SUP area are allocated ***Administratively Withdrawn (MA 3C – Developed Recreation, Winter Sports)***, and ***Riparian Reserves (RR)***. The SUP area also lies within a ***Tier 1 Key Watershed***. The future operations and management of Crystal Mountain must be consistent with all forest-wide standards and guidelines, plus the standards and guidelines applicable to these allocations. The USFS and Crystal Mountain will need to address the consistency of the overall MDP, as well as the individual projects outlined in the MDP, with the Forest Plan, as Amended.

The 1990 Forest Plan specifies that any new facilities on the MBSNF should employ the Cascadian architectural theme. The upgraded/expanded maintenance facilities, new hotel facilities, as well as new employee housing and skier services facilities would be designed to meet these guidelines.

Watershed Restoration Projects

While the Silver Creek watershed is recovering from the effects of both natural and man-induced disturbances, certain Aquatic Conservation Strategy Objectives (ACSOs) are not met under current conditions (Jones & Stokes Associates, 1997). (These nine objectives are included under the Northwest Forest Plan Aquatic Conservation Strategy (USDA, USDI 1994).) Implementation of watershed restoration projects is needed to accelerate the watershed restoration process at Crystal Mountain: watershed restoration is one of the four components of the Aquatic Conservation Strategy (USDA, USDI 1994). Implementation of the projects outlined in the following documents would help meet this need: Watershed Restoration Plan for Crystal Mountain Master Development Plan (Jones & Stokes Associates, 2001a; Appendix C), Monitoring Framework Plan for Crystal Mountain Master Development Plan (Jones & Stokes Associates, 2001b; Appendix D), Road Management Plan for Crystal Mountain Master Development Plan (Jones & Stokes Associates, 2001c; Appendix E), Draft Final Conceptual Stormwater Management Plan (Golder Associates, 2000b; Appendix M), and the Crystal Mountain Master Development Plan (Sno.engineering, 1998).

There is a need to amend the Mount Baker-Snoqualmie National Forest Land and Resource Management Plan as Amended.

On April 3, 1992, the Crystal Mountain SUP was reissued and the area of the SUP was reduced by approximately 550-acres. The 550-acre parcel was removed from the northeast portion of the original Crystal Mountain SUP area in view of Crystal Mountain's future goals, which gave no short- or long-term consideration for lift and trail construction in this area. The allocation of the parcel, however remains MA 3C - Developed Recreation - Winter Sports Resorts. Dispersed recreation comprises the dominant use of this parcel, resulting in an inconsistency between the allocation of the parcel and its actual use. A non-significant amendment to the Forest Plan, reallocating the parcel to MA 1B - Dispersed Recreation, Semi Primitive Non-Motorized, would eliminate the inconsistency.

1.2 TIERING, MANAGEMENT DIRECTION, AND U.S. FOREST SERVICE POLICY

In evaluating and deciding upon Crystal Mountain's proposal, the USFS is required to ensure that the proposal is consistent with management direction for the project area. There are a variety of laws and regulations that call for the agency to work with private industry to provide needed recreational facilities, including downhill ski areas, on suitable National Forest System Lands (NFSL). The major laws include the Organic Administrative Act of 1897, the Weeks Act of 1911, the Multiple-Use Sustained Yield Act of 1960, the Forest and Rangeland Renewable Resources Planning Act of 1974, the National Forest Management Act of 1976, and the National Forest Ski Area Permit Act of 1986. The USFS is authorized to provide recreational opportunities on NFSL funded through private enterprise (16 United States Code [USC] 497). Special Use Permits are to be administered for recreation uses that serve the public, promote public health and safety, and protect the environment.

Further, as directed by the National Forest Ski Area Permit Act of 1986 (16 USC 497 and 26 CFR 251), a ski area is defined as:

“a site and attendant facilities expressly developed to accommodate alpine or nordic skiing and from which the preponderance of revenue is generated by the sale of lift tickets and fees for ski rentals, for skiing instruction and trail passes for the use of permittee-maintained ski trails. A ski area may also include ancillary facilities directly related to the operation and support of skiing activities.”

Skiing is an important component of the recreational opportunities offered by NFSL. USFS policy also encourages year-round recreation opportunities at ski areas to serve the public, provide economic stability to local communities, and promote economic commercial ventures. *The Recreation Agenda* (USDA, 2000a) details the USFS role in increasing outdoor recreation on NFSL through partnerships with other public and private entities (e.g. state agencies, the ski industry, and non-profit organizations).

1.2.1 TIERING TO PREVIOUS NEPA ANALYSES

This EIS tiers to previous NEPA analyses and decisions, which have provided direction for management of lands within the MBSNF.

1.2.1.1 1990 Land and Resource Management Plan FEIS for the Mt. Baker-Snoqualmie National Forest

In 1990, the Land and Resource Management Plan FEIS for the Mt. Baker-Snoqualmie National Forest (USDA, 1990b) was published. This document presented the results of an environmental analysis of alternative strategies for future management of the land and resources of the Mt. Baker-Snoqualmie National Forest. In this analysis, the long-term estimates of Forest resources and environmental conditions were considered, and the selected alternative was developed into the Land and Resource Management Plan for the Mt. Baker-Snoqualmie National Forest (i.e the Forest Plan).

1.2.1.2 1994 FSEIS and Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl

In 1994, the Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl (USDA, USDI, 1994), was published (i.e. the Northwest Forest Plan). The Northwest Forest Plan provides oversight for federal lands within the range of the northern spotted owl (generally in western Oregon, Washington and northern California) and amended Forest Service Land and Bureau of Land Management planning documents to include statutory basis for ecosystem management, land allocations, standards and guidelines, and applications of the decision. The key elements of the Northwest Forest Plan are the system of Late Successional and Riparian Reserves, the Aquatic Conservation Strategy, additional forest-wide standards and guidelines, and various standards and guidelines affecting each of seven different land allocations.

1.2.1.3 2001 FSEIS and Record of Decision for Amendments to Survey and Manage Protection Buffer, and other Mitigation Measures Standards and Guidelines

In 2001 the Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USDA, USDI, 2001) was published. This ROD amended the Northwest Forest Plan to retain the major elements of Survey and Manage, but restructured them for clarity. The ROD also described criteria and processes for changing species assignments in the future, and removed 72 species in all or part of their range because new information indicated they were secure or didn't meet the criteria for Survey and Manage species.

1.2.1.4 2004 FSEIS and Record of Decision Amending Resource Management Plans for Seven Bureau of Land Management Districts and Land and Resource Management Plans for Nineteen National Forests within the Range of the Northern Spotted Owl: Decision to Clarify Provisions Relating to the Aquatic Conservation Strategy

In 2004, the Record of Decision Amending Resource Management Plans for Seven Bureau of Land Management Districts and Land and Resource Management Plans for Nineteen National Forests Within the Range of the Northern Spotted Owl (USDA, USDI, 2004a) was published. This ROD clarified the proper spatial and temporal scale for evaluating progress towards attainment of ACS objectives by stating that fifth-field watershed and larger scales, as well as long-term time frames, are appropriate for evaluating progress towards ASCO attainment. This ROD also clarified that the Aquatic Conservation Strategy objectives are not to be interpreted as standards and guidelines applicable to individual projects. Projects within Riparian Reserves are to be consistent with RR standards and guidelines. Projects will be consistent with RR standards and guidelines that include direction to meet, not adversely affect, or not retard/prevent attainment of ACS objectives if the decision maker can determine, from the record, that the project was designed to contribute to maintaining or restoring the fifth-field watershed over the long-term, even if short-terms effects may be adverse.

1.2.1.5 2004 FSEIS and Record of Decision to Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines in Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl

In 2004, the Record of Decision to Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines in Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl (USDA, USDI, 2004b) was published. This ROD amends the Northwest Forest Plan by removing the Survey and Manage Mitigation Measure Standards and Guidelines. Qualifying Survey and Manage species are to be included in one or more of the agencies' Special Status Species Programs..

1.2.2 MT. BAKER-SNOQUALMIE NATIONAL FOREST LAND AND RESOURCE MANAGEMENT PLAN

The Forest Plan, as Amended (USDA, 1990a; USDA, USDI, 1994), provides management direction for the NFSL within the ski area.

The Forest Plan, as Amended recognizes that “developed recreation will continue to be an important program on the Forest” (USDA, 1990a, p. 4-20). The Forest Plan, as Amended also states, “all ski areas that have expansion capacity under approved ski area master plans are expected to add development facilities. Expansion should be commensurate with expected improvements in service and permitted on the basis of actual public need. It is anticipated that some ski areas will have base area expansion, particularly to enhance overnight and mid-week resort opportunities” (USDA, 1990a, p. 4-21). The Forest Plan, as Amended also calls for the expansion of public information and interpretative services, including staffing, facilities, displays, equipment, and published materials. “Emphasis will continue towards sharing of

information services with other agencies and partnerships with private outlets where possible” (USDA, 1990a, p. 4-21).

The 1990 Forest Plan EIS addressed future trends at ski areas on the MBSNF by stating that “there is evidence that the Cascade Ski Areas suffer some amount of competitive disadvantage without the ability to offer overnight accommodations. There is a market for local ski area vacationing, not as a substitute for the preferable weather of the Rockies, but to serve the skiers who might otherwise vacation in Oregon, Idaho, and British Columbia. USFS policy does not oppose overnight accommodations in ski areas, but does oppose financial arrangements that compromise the concept of full public access to such accommodations” (USDA, 1990b, p. III-169).

1.2.3 FOREST PLAN MANAGEMENT DIRECTION AND LAND ALLOCATION

The Crystal Mountain SUP area contains several land allocations under the Forest Plan, as Amended (USDA, 1990a; USDA, USDI, 1994). These land allocations and pertinent management direction are described below. For more detailed descriptions, standards, and guidelines associated with each allocation, see the Forest Plan, as Amended.

- Administratively Withdrawn, including:
 - MA 3C - Developed Recreation, Winter Sports Resorts
- Riparian Reserve

Note that the entire SUP area lies within a Tier 1 Key Watershed. Under the Forest Plan, as Amended, Key Watersheds overlay the land allocations, and are one of the four components of the Aquatic Conservation Strategy (ACS) (USDA, USDI 1994).

Other land allocations adjacent to the Crystal Mountain SUP include:

Administratively Withdrawn, including:

- MA 1B – Dispersed Recreation - Semi-primitive, Non-motorized
- MA 15A - Mountain Goat Habitat

Matrix, including:

- MA 2A - Scenic Viewshed, Foreground [Visually Sensitive Highway Corridors]

Congressionally Withdrawn, including:

- MA WI-1 Norse Peak Wilderness⁹;

Also adjacent to the Crystal Mountain SUP area is Mount Rainier National Park. The Pacific Crest National Scenic Trail is another important feature that runs adjacent to the SUP area.

Existing land allocations are illustrated in Figure 1.2.2-1, proposed land allocations are illustrated in Figure 1.2.2-2.

⁹ Areas of the Norse Peak Wilderness adjacent to Crystal Mountain, are administered by the Wenatchee National Forest.

1.2.3.1 Administratively Withdrawn Areas

As identified in the Northwest Forest Plan (USDA, USDI, 1994), administratively withdrawn lands are those excluded from planned or scheduled timber harvest through current forest plans. Examples include recreation and visual areas, backcountry, and other areas not scheduled for timber harvest. Any timber harvested in these areas through salvage or other unscheduled harvest would not contribute to the *allowable sale quantity*. For purposes of this FEIS, Administratively Withdrawn includes the Crystal Mountain SUP boundary (4,350 acres, allocated to MA 3C- Winter Sports Resorts), the approximately 550-acre parcel to the northeast of the current SUP that was relinquished by Crystal Mountain on April 3, 1992, and the two parcels north of the Crystal Mountain SUP boundary: MA 1B – Dispersed Recreation - Semi-primitive, Non-motorized (about 300 acres) and MA 15A – Mountain Goat Habitat (approximately 240 acres).

MA 3C - Developed Recreation, Winter Sports Resorts

MA 3C includes “alpine skiing and related activities such as Nordic skiing, snow play, tobogganing, horseback riding, tennis, and other winter and summer activities at resorts established for those purposes. These areas will be managed to provide, through private sector concession operations [e.g. Crystal Mountain], a diversity of winter and summer recreation activities that emphasize a Forest setting” (USDA, 1990a). Some applicable 1990 Forest Plan guidelines in addition to those mentioned above include:

- “During summer activities, winter sports resorts will be discouraged from significantly impacting wilderness resources” (USDA, 1990a, p. 4-183).
- “Do not issue permits for activities which are not compatible with recreation use” (USDA, 1990a, p. 4-183).
- “Roads and trails shall be planned and developed according to an approved area site development plan. Other objectives may be met if recreation use is not impaired” (USDA, 1990a, p. 4-184).

MA 1B - Dispersed Recreation- Semi-Primitive - Non-Motorized

MA 1B includes areas characterized by a predominantly natural or natural appearing environment generally free from evidence of sights and sounds of human activities. Recreation experiences carry a moderate degree of risk and challenge. Limited facilities are allowed in these areas to achieve signing, sanitary, safety needs, resource protection, and recreation enhancement (USDA, 1990a, p. 4-161). The management areas located to the north of the SUP boundary (excluding those lands allocated MA 2A and MA 15A) are allocated MA 1B. The Proposed Action would reallocate the previously mentioned 550-acre parcel of land that was relinquished from the Crystal Mountain SUP in 1992 from MA 3C to MA 1B.

MA 15A - Mountain Goat Habitat

A mountain goat habitat unit (MA 15A) is located approximately 0.7 mile north of the Crystal Mountain SUP and east of Crystal Mountain Boulevard, including portions of Sections 2, 11, and

12, T. 17 N, R.10 E. The Forest Plan goal for this area is to protect and manage habitat to maintain or increase mountain goat populations. MA 15A is applied to selected areas of current and historical mountain goat habitat, which characteristically contain diverse vegetation, including mature and old growth stands, steep rocky cliffs, projecting pinnacles, ledges, and talus slopes. Timber harvest activities should have restrictions and no new roads are permitted (USDA, 1990a, p. 4-233-234). No timber harvests-or new road construction are planned for this area.

1.2.3.2 Riparian Reserves

Riparian Reserves are lands along all streams, wetlands, ponds, lakes, and unstable and potentially unstable areas (USDA, USDI, 1994). Riparian Reserves are one of the four components of the Aquatic Conservation Strategy. The RRs allocation includes those portions of watersheds where riparian-dependent resources receive the primary emphasis. Specifically, “Riparian Reserves include those portions of a watershed directly coupled to streams and rivers, that is, the portions of a watershed required for maintaining hydrologic, geomorphic, and ecologic processes that directly affect standing and flowing water bodies such as lakes and ponds, wetlands, streams, stream processes, and fish habitats” (USDA, USDI, 1994, p. B-12-13). Where Riparian Reserves occur within other land allocations, the standards and guidelines for both allocations apply (USDA, USDI, 1994).

1.2.3.3 Matrix

Matrix consists of those federal lands outside of all the other land allocations established by the Northwest Forest Plan (USDA, USDI, 1994). It is the area in which most timber harvest and other silvicultural activities will be conducted. Matrix lands may include forested and nonforested areas. Timber harvest and other silvicultural activities could be conducted in the portion of the matrix with suitable forest lands. For portions of matrix located within Key Watersheds (e.g. Tier 1 Key Watershed), standards and guidelines for Key Watersheds apply, as well as all forest-wide and matrix standards and guidelines (USDA, USDI, 1994, p. C-39).

MA 2A - Scenic Viewshed, Foreground

MA 2A includes selected, visually sensitive corridors and viewsheds along major highways. The primary goal for MA 2A is to provide a visually appealing landscape as viewed from the travel corridor and use areas. Scenic viewsheds accommodate a variety of activities which, to the casual observer, are either not evident or are visually subordinate to the natural landscape. Developed sites/recreation facilities may be allowed, though any structures should be compatible with the established landscape. MA 2A includes lands north of the Crystal Mountain SUP along Crystal Mountain Boulevard including lands immediately north of the proposed Northway/Morning Glory expansion area (USDA, 1990a, p.4-169)

1.2.3.4 Congressionally Withdrawn

MA WI-1 - Norse Peak Wilderness

The Norse Peak Wilderness (NPW) adjacent to the Crystal Mountain SUP area is administered by the Wenatchee National Forest (WNF). In total, the NPW occupies 50,923 acres, of which 36,295 acres are within the WNF. The primary goal of MA WI-1 is to “preserve and protect the natural character for future generations, and provide opportunities for solitude, challenge, inspiration, and scientific study” (USDA, 1990b, p. IV-227). Due to the proximity of the Pacific Crest Trail (PCT) and Crystal Mountain, the portion of the NPW that is adjacent to the Crystal Mountain SUP boundary lies primarily within the “Semi-Primitive” Recreation Opportunity Spectrum (ROS) (USDA, 1990b, p. E-2). Within this area, the Limits of Acceptable Change (LAC) standards allow that “there should be an 80 percent probability that not more than either 10 parties or 10 individuals traveling alone, will be encountered per day during the primary use season (summer). The maximum party size shall not exceed 12 people and/or livestock combined” (USDA, 1990b, p. IV-73-74). The WNF Plan provides that “management actions will be implemented to control or restrict visitor use when user impacts result in a change in biological or social resource conditions that approach LAC” (USDA, 1990b, p. IV-228).

1.2.3.5 Tier 1 Key Watershed

According to the Northwest Forest Plan (USDA, USDI, 1994), all federally-administered lands within the range of the northern spotted owl are designated by land allocations, overlaid by one of the three watershed categories: Tier 1 Key Watersheds, Tier 2 Key Watersheds, or non-Key Watersheds. Key Watersheds are one of the four components of the Aquatic Conservation Strategy. Key Watersheds are “a system of large refugia comprising watersheds that are crucial to at-risk fish species and stocks and provide high water quality” (USDA, USDI, 1994, p. B-12). Key Watersheds are divided into two categories: ***Tier 1 Key Watersheds*** directly contribute to conservation of at-risk anadromous salmonids, bull trout, and resident fish; ***Tier 2 Key Watersheds*** may not contain at-risk fish stocks, but they are important sources of high quality water. “Key Watersheds with high quality conditions will serve as anchors for the potential recovery of depressed stocks. Those of lower quality habitat have a high potential for restoration and will become future sources of high quality habitat with the implementation of a comprehensive restoration program” (USDA, USDI, 1994, p. B-18). The Crystal Mountain SUP area is situated within the Upper White River Watershed, which has been identified as a ***Tier 1 Key Watershed***.

1.2.4 SELECTED FOREST PLAN MANAGEMENT DIRECTION, BY RESOURCE AREA

Within the context of the 1994 amendments to the Forest Plan (i.e. AWAs, Tier 1 Key Watersheds, and RR), the Forest Plan provides resource-specific management direction for the national forest lands within the ski area. The following section discusses selected direction addressing the following resources, as applicable to proposed development at Crystal Mountain:

- Riparian Reserves
- Forest-wide Recreation

- Developed Recreation
- Winter Recreation
- Social and Economic Factors
- Visual Resources

Note that within Administratively Withdrawn Areas, the areas “have already been designated in existing plans. The amended plans will apply the most restrictive applicable standards and guidelines, whether from Attachment A or from existing plans” (USDA, USDI 1994, p. 9).

1.2.4.1 Riparian Reserves

As a general rule, standards and guidelines for Riparian Reserves prohibit or regulate activities in Riparian Reserves” (2004 ROD). Below are some of the Riparian Reserve standards and guidelines that are particularly applicable to the proposed MDP at Crystal Mountain:

- *RM-1*. “New recreational facilities within Riparian Reserves, including trails and dispersed sites, should be designed to not prevent meeting Aquatic Conservation Strategy objectives. Construction of these facilities should not prevent future attainment of these objectives. For existing recreation facilities within Riparian Reserves, evaluate and mitigate impact to ensure that these do not prevent, and to the extent practicable contribute to, attainment of Aquatic Conservation Strategy objectives.”
- *RM-2*. “Adjust dispersed and developed recreation practices that retard or prevent attainment of Aquatic Conservation Strategy objectives. Where adjustment measures such as education, use limitations, traffic control devices, increased maintenance, relocation of facilities and/or specific site closures are not effective, eliminate the practice or occupancy.”
- *FM-1*. “Design fuel treatment and fire suppression strategies, practices, and activities to meet Aquatic Conservation Strategy objectives, and to minimize disturbance of riparian ground cover and vegetation. Strategies should recognize the role of fire in ecosystem function and identify those instances where fire suppression or fuels management activities could be damaging to long-term ecosystem function.”
- *RA-1*. “Identify and attempt to secure in-stream flows needed to maintain riparian resources, channel conditions, and aquatic habitat.”
- *RA-2*. “Fell trees in Riparian Reserves when they pose a safety risk. Keep felled trees on-site when needed to meet coarse woody debris objectives.”
- *RA-3*. “Herbicides, insecticides, and other toxicants, and other chemicals shall be applied only in a manner that avoids impacts that retard or prevent attainment of Aquatic Conservation Strategy objectives.”
- *RA-4*. “Locate water drafting sites to minimize adverse effects on stream channel stability, sedimentation, and in-stream flows needed to maintain riparian resources, channel conditions, and fish habitat.”
- *WR-1*. “Design and implement watershed restoration projects in a manner that promotes long-term ecological integrity of ecosystems, conserves the genetic integrity of native species, and attains Aquatic Conservation Strategy objectives.”

- *WR-2*. “Cooperate with federal, state, local, and tribal agencies, and private landowners to develop watershed-based Coordinated Resource Management Plans or other cooperative agreements to meet Aquatic Conservation Strategy objectives.”
- *WR-3*. “Do no use mitigation or planned restoration as a substitute for preventing habitat degradation.”
- *FW-1*. “Design and implement fish and wildlife habitat restoration and enhancement activities in a manner that contributes to attainment of Aquatic Conservation Strategy objectives.”
- *FW-4*. “Cooperate with federal, tribal, and state fish management agencies to identify and eliminate impacts associated with habitat manipulation, fish-stocking, harvest and poaching that threaten the continued existence and distribution of native fish stocks occurring on federal lands.”

1.2.4.2 Forest - Wide Recreation

The primary goal for recreation management on the MBSNF is to “Provide a broad spectrum of recreation opportunities and experiences, with an emphasis on those opportunities which require a natural setting.” As applicable to proposed development at Crystal Mountain, key 1990 Forest Plan recreation management goals and guidelines are outlined below (USDA, 1990a, p. 4-2):

- “The Forest will be responsive to a greater diversity of forest customers by emphasizing the needs of the very young and old, the disabled, and those of culturally and economically diverse background.”
- “Embark on market research techniques to assure that recreation facilities, opportunities, and services focus on the needs of our customers.”
- “Encourage a sense of ownership through expanded Interpretation and Education activities; emphasize traditional values of ‘conservation,’ and market the special places, special activities and special opportunities of the MBSNF.”
- “Provide a full spectrum of recreation facilities (from full service resorts to trailheads) to serve all of the recreation users, providing amenities (hot water, showers, trailer dumps) where necessary and appropriate, that allow the recreating customer to enjoy the natural setting while creating a sense of quality, comfort, and security.”
- “Encourage partnerships of public and private suppliers of recreation services and facilities and administer the partnerships to ensure an enduring relationship of mutual gain.”

1.2.4.3 Developed Recreation

Within the standards and guidelines for Forest-Wide recreation, the management goal for the MBSNF is to “Provide a broad spectrum of recreation opportunities and experiences on the MBSNF” (USDA, 1990a, p.4-84). Under the auspices of this goal, the 1990 Forest Plan provides management guidelines for Developed Recreation on the MBSNF. Elements of these management guidelines that relate to the Proposed Action include the following (USDA, 1990a, p. 4-85):

- “Provide public information that informs the user about recreation opportunities and how to care for forest resources.”
- “Evaluate opportunities for private operation of MBSNF recreation facilities.”
- “Developed facilities will be administered and maintained to provide visitor safety and sanitation, protect facility and site resources, and provide for visitor recreation needs and convenience; while reducing unit costs.”
- “Encourage year-round recreation use at winter-sports sites. Permit summer facilities that are compatible with or enhance natural resource-based recreation opportunities and in keeping with the ROS.”¹⁰

1.2.4.4 Winter Recreation

The Forest-wide Recreation Standards and Guidelines include management guidelines on the MBSNF for Winter Recreation. Among these guidelines, the following elements provide management direction for the Crystal Mountain operation (USDA, 1990a, p. 4-91-92):

- “Patrol and safety may be provided through a combination of permittee and/or volunteer ski patrols. The USFS may provide leadership and training in such patrol activity.”
- “Different skill levels of users shall be provided for and considered when designing trails and related facilities. A spectrum of opportunities for winter recreation will be maintained, including primitive dispersed opportunities with no facilities.”
- “Alpine ski permittees will be encouraged to integrate winter dispersed recreation into their operations if and when the opportunity and demand exists.”
- “Winter recreation facilities, such as parking lots, groomed ski trails, motorized use zones, and cross country ski trails, should attempt to avoid south-facing aspects where significant wildlife winter use occurs.”

1.2.4.5 Social and Economic Factors

The primary 1990 Forest Plan goal related to social and economic factors is to “Promote human resources, civil rights, and community development within the zone of influence of the MBSNF.” Key community and human resources management objectives that may be pertinent to Crystal Mountain operations include complying with the Civil Rights Act of 1994, ensuring “that the needs of handicapped are considered in the design of forest facilities,” and participating “in human resources programs that support community and economic development” (USDA, 1990a, p. 4-96).

¹⁰ There are five ROS inventory classifications within the Crystal Mountain SUP; the base area is classified as Urban (Urban was unmapped during forest planning due to scale limitations with the software used to display ROS inventory classification), the Gold Hill’s development are classified as “Rural”; all existing lifts and ski trails, as well as the full extent of the Southback and Bullion Basin/East Peak areas, are located within the “Roaded Natural” ROS; the area north of Right Angle Ridge (Northback) is classified as Semi-Primitive Non-motorized; an area along Crystal Mountain Boulevard in the vicinity of the “Stump Patch” clearcut is classified as “Roaded Modified”.

1.2.4.6 Visual Resources

The USFS has adopted a Visual Resources Management System (USFS, 1974) for NFSL to determine *Visual Quality Objectives* (VQOs). The system evaluates characteristics of the landscape and determines their overall importance to visual quality in the area. VQOs help define how the landscape will be managed and provide guidelines for acceptable modifications within an area. VQOs cannot always be met, nor are they requirements.

In the 1990 Forest Plan, Crystal Mountain is allocated to Administratively Withdrawn MA 3C, which prescribes VQOs of *foreground retention* and *middle-ground partial retention*.¹¹ Development within the SUP generally meets these objectives, except in the base area, which meets a VQO of *modification*. Development in the base area under the Proposed Action must be designed to remain subordinate to the landscape. This may require special measures to blend ski runs, ski lifts, and buildings into the natural environment (USDA, 1990a, p. 4-183). All new facilities on the MBSNF should employ the Cascadian architectural style, which is characterized by the use of wood and other forest resources, earth tone colors, and steep roof pitches of gable and hipped gable structure (USDA, 1990a, pp. 4-140-141).

The Desired Future Condition of MA 3C, as stated in the 1990 Forest Plan, is as follows:

“developed recreation sites may appear mostly natural to rural in setting...design and construction will repeat the color, shapes, and lines of the surrounding environment...and any vegetative management is done for the purpose of maintaining a safe, functional, and attractive site...” (USDA, 1990a, p. 4-175).

The 1990 Forest Plan EIS also discusses the effects of recreation on scenery:

“Ski area development will allow the removal, modification, or addition of vegetation, the shaping of slope, and the addition or modification of structures, but will be guided by Visual Quality Objectives” (USDA, 1990b, p. 4-130).

1.2.5 PACIFIC NORTHWEST REGION EIS FOR MANAGING COMPETING AND UNWANTED VEGETATION

In implementing any authorized MDP activities, Crystal Mountain will be required to be consistent with relevant information found in the Record of Decision, December 8, 1988 (USDA, 1988), for the Region 6 Managing Competing and Unwanted Vegetation Environmental Impact Statement, the associated Mediated Agreement (May 1989) (USDA, 1989), especially the theme of the selected alternative: to reduce reliance on herbicides, reduce the use of fire for treating slash, and protect rural communities from the effects of smoke; and to use early involvement of

¹¹ *Partial Retention* means that any activity must be visually subordinate to the natural characteristics of the landscape. Landscapes with this designation can be modified, but the resulting changes in patterns of vegetation, line, form, color, and texture should not contrast strongly with the adjacent undisturbed landscape. *Retention* permits landscape modifications that are not visually evident to the casual Forest visitor, and which may only repeat natural characteristics of the landscape (line, form, texture, color). Changes in their qualities of size, amount, intensity, direction, pattern, etc. should not be evident.

the public to help set project goals, assist in environmental analysis, observe project implementation and to monitor the results of projects.

Crystal Mountain will also be required to comply with the 1990 Forest Plan Amendment 14, which added to the Forest-wide Standards and Guidelines, “Prevention Strategies and Best Management Practices” (BMPs) that must be implemented for all projects in order to prevent the spread of noxious weeds (USDA, 1990a).

1.2.6 THE RECREATION AGENDA

The primary goal of *The Recreation Agenda* (USDA, 2000a) is to provide quality recreation opportunities on NFSL in an ecologically sustainable manner. One of the purposes of this initiative is to promote local economic diversity by encouraging travel and tourism opportunities in collaboration with professionals in the private sector. Ski areas operated by the private sector provide a wide range of winter and summer outdoor recreation opportunities that can contribute to shaping local economies.

1.2.7 NATIONAL FOREST SKI AREA PERMIT ACT

The USFS is to provide recreational opportunities on NFSL funded through private enterprise. Special Use Permits are to be administered for recreation uses that serve the public, promote public health and safety, and protect the environment (16 USC 497). The *National Forest Ski Area Permit Act* (16 USC 497b; Forest Service Manual [FSM] 2700-92-13) authorizes the issuance of ski area permits by the USFS for “the use and occupancy of suitable NFSL for nordic and alpine skiing operations and purposes.” The act further states that a SUP “shall encompass such acreage as the USFS determines sufficient and appropriate to accommodate the permittee’s needs for ski operations and appropriate ancillary facilities.”

1.2.8 FOREST SERVICE MANUAL – CHAPTER 2700

Policy contained in FSM 2700 indicates that on-site housing for employees of the permittee may be required for “some special recreation uses, such as ski areas and year-round resorts” (FSM 2700-92-13). The authorized USFS officer is directed to evaluate the need and justification for employee housing within the SUP area on a case by case basis. The following conditions must be met before the USFS will consider the proposed development of employee housing within the Crystal Mountain SUP area: (1) the proposed development of employee housing is consistent with the management direction of the Forest Plan, (2) the proposed development of employee housing is in compliance with the appropriate environmental analysis per NEPA guidelines, and (3) there is a clear and convincing need for 24-hour, on-site property protection and/or intermittent emergency service at other than normal operating hours, and the commuting time between the SUP area and the nearest private property available for housing exceeds one hour (FSM 2341.5).

1.2.9 OTHER ANALYSES INCORPORATED INTO THE EIS

This FEIS also refers to the *Upper White and Greenwater Watershed Analysis* (USDA, 2000b), *Crystal Mountain Recreation Area Master Plan Environmental Assessment Report* (USDA,

1983), *Initial Upper White River Watershed Analysis and Late-Successional Reserve Assessment 125* (USDA, 1995), the *Silver Creek Watershed Condition Assessment* (Jones & Stokes Associates, 1997) and numerous technical studies. Separate documents are available for review at the Mt. Baker-Snoqualmie National Forest Supervisor's Office (MBSNF SO). Information from these documents will be incorporated by reference into this FEIS as it applies to the Proposed Action. A brief description of key documents is provided below.

1.2.9.1 Resource Analyses and Assessments Incorporated by Reference

Upper White and Greenwater Watershed Analysis

The *Upper White and Greenwater Watershed Analysis* (USDA, 2000b) was developed “to satisfy the watershed analysis requirements established by the Northwest Forest Plan” (USDA, USDI, 1994, p. 1-1). The analysis area included four separate watersheds, the Upper White River, West Fork White River, Greenwater River, and Huckleberry Creek. The document updates the information presented in the *Upper White River Watershed Analysis* (USDA, 1995).

Initial Upper White River Watershed Analysis and Late-Successional Reserve 125 Assessment

The purpose of the *Initial Upper White River Watershed Analysis and Late-Successional Reserve 125 Assessment* (USDA, 1995) was to “develop and document a scientifically-based understanding of the ecological structures, functions, processes, and interactions occurring within a watershed, and to identify trends, conditions, and restoration opportunities” (USDA, 1995, p. 1-1). This document serves as a mechanism to support the broad ecosystem management objectives at the watershed scale (20 to 200 square miles), according to the Northwest Forest Plan (USDA, USDI, 1994).

Silver Creek Watershed Condition Assessment

The *Silver Creek Watershed Condition Assessment* (Jones & Stokes Associates, 1997) “identifies and evaluates relevant ecological processes, their interactions, and the cumulative effects of past, present and reasonably foreseeable management, with primary emphasis given to the physical and aquatic environments” (Jones & Stokes Associates, 1997, p. 1-2). This assessment evaluates the Silver Creek watershed within and adjacent to the Crystal Mountain SUP area (approximately 5,997 acres).

Mount Baker-Snoqualmie National Forest Roads Analysis

Roads Analysis, a requirement of 36 CFR 212.5, has been completed (*Forest-wide Roads Analysis, Mt. Baker-Snoqualmie National Forest, July 2003*). The *Roads Analysis Management Matrix* for National Forest System roads within the SUP area may be reviewed in the project files. See the *Road Management Plan for Crystal Mountain Master Development Plan* (Jones & Stokes Associates, 2001c) for further detailed information on all roads within the SUP area (including road type, purpose, anticipated future use, and any drainage concerns).

Forest-Wide Late Successional Reserve Assessment - Mt. Baker-Snoqualmie National Forest

The objective of the *Forest-Wide Late Successional Reserve Assessment* (USDA, 2001) for the Mt. Baker-Snoqualmie National Forest was to “determine how well the portion of the LSR network” identified under the Northwest Forest Plan (USDA, USDI, 1994), “within the Mt. Baker Snoqualmie National Forest is functioning” (USDA, 2001, p. 1). The document is intended to identify management activities that are consistent with the standards and guidelines for LSRs.

Environmental Baseline Assessment for Federal Lands in the Upper White River Fifth Field Watershed

The *Environmental Baseline Assessment for Federal Lands in the Upper White River Fifth Field Watershed* (Jones & Stokes Associates, 1999) describes the habitat function indicators specified by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) for the determination of effects on Bull trout and Chinook salmon in the Upper White River watershed. This document is the reference point for all fish impact assessments prepared for projects at Crystal Mountain, including the MDP FEIS.

1.2.9.2 Crystal Mountain Planning Documents

Crystal Mountain Recreation Area Master Plan Environmental Assessment Report (Current Master Plan)

The *Crystal Mountain Recreation Area Master Plan Environmental Assessment Report* (USDA, 1983) analyzes the developments proposed in the 1983 Crystal Mountain MDP (Sno.engineering, 1983) with respect to public need, socioeconomic impact, environmental effects, and existing laws and agency policies, as well as the decision of the Forest Supervisor. The 1983 MDP provided a comprehensive overview of the proposed development activities at Crystal Mountain for the next 5 to 10 year period, including ski lifts, restaurants, ski trails, and other construction. The 1983 MDP also called for modification of the existing facilities and alterations to the water and sewage treatment facilities. Six alternatives were evaluated in the environmental analysis and the adopted alternative (Alternative 5) was considered the best combination of benefits and the environmentally preferable alternative.

1998 Crystal Mountain Master Development Plan (Proposed Action)

This document was prepared in August 1998 and revisions were made in response to design considerations and specific environmental issues raised by the USFS IDT. A final document was released in November 1998. During the scoping period and subsequent alternatives identification, additional modifications were made to the document. These modifications are discussed briefly in Chapter 2 (see Section 2.2-Alternatives Considered but Eliminated and Modifications to the MDP) and are detailed in a memorandum entitled *Alternatives Considered and Modifications to the Crystal Mountain MDP* (SE GROUP, 2001a), located in Appendix A. The revised MDP provides the basis for the existing operating conditions at Crystal Mountain, and provides detailed planning analysis of the proposed MDP components.

1.2.10 OTHER KEY LAND MANAGEMENT ELEMENTS

1.2.10.1 Mt. Rainier National Park

The Crystal Mountain SUP area borders on MRNP to the west. According to the MRNP GMP ROD that was approved on February 7, 2002, these specific areas would be zoned as “pristine” (NPS, 2002). The pristine zone “provides for an essentially untouched, primeval environment that is modified only by existing cultural resources; there are no trails or designated campsites of any kind” (NPS, 2002). “All [recreation] activities are dependent on cross-country travel. Activities include day hiking, backpacking, camping, climbing, snowshoeing, and cross-country [backcountry] skiing” (NPS, 2002). Under the GMP ROD, the developed hiking trail that extends from State Route (SR) 410 to the East Park Boundary is zoned as “semi-primitive.” This zone includes 50 feet on either side of the trail and is characterized as an area where visitors enjoy a backcountry experience with only occasional periods of solitude. MRNP will develop and implement a monitoring program to determine if unacceptable conditions exist for each management zone through the use of both resource and visitor indicators. If established resource and visitor conditions are exceeded, management actions as necessary will be taken to improve the situation and achieve the target conditions within the zone. Management actions would range from low intrusiveness (e.g. education and signage), to highly restrictive (e.g. closures or use limitations). The NPS would implement the least intrusive actions first, and evaluate their effectiveness before the next level of action would be taken.

1.2.10.2 Pacific Crest National Scenic Trail

The PCT is designated as part of the National Trails System. Section 7(a) of the National Trails System Act of 1968 established the relationship between the trail and the management of adjacent land:

“Management and development of each segment of the National Trails System shall be designed to harmonize with and complement any established multiple-use plans for that specific area in order to ensure continued benefits from the land” (National Trails System Act – P.L. 90-543).

The selected management alternative in the *Comprehensive Management Plan for the Pacific Crest National Scenic Trail* (USDA, 1982) clarifies the relationship between the trail and management of adjacent lands and is consistent with Section 7(a) of the National Trails System Act of 1968. Specifically pertaining to National Forest lands, the selected alternative states:

“The entire landscape and its scenic quality are important to the purposes of the Pacific Crest National Scenic Trail. Viewing and understanding resource management and other cultural activities are considered to be part of the normal character of the trail. The management of various resources will give due consideration to the existence of the trail and trail users within the multiple-use concept” (USDA, 1982, p. 17).

Management guidelines for public lands adjacent to the PCT are also discussed in the *Comprehensive Management Plan for the Pacific Crest National Scenic Trail*. The management plan specifically states:

“Within federal lands outside National Parks and Wilderness (57 percent of the trail) the trail must co-exist in harmony with all other resource uses and activities of the land as determined through the land management planning process. The trail will cross a mosaic of areas differing in primary management emphasis. This could be grazing, key wildlife habitat, special interest such as scenic or geologic, Developed Recreation [Emphasis Added], unroaded recreation, research, natural, or intensive timber management. Viewing and understanding this array of resources and management is one of the primary recreation opportunities to be made available over these portions of trail...The agencies should look at this as an opportunity to explain the multiple-use concept...some resource activities may occur immediately adjacent to or across the trail, the agencies will protect the integrity of the trail proper by modifying management practices as needed. Timely construction of and signing of temporary locations to avoid other resource activities...will do much to mitigate any negative feelings” (USDA, 1982, p. 22).

Some of the other management direction applicable to the PCT in this area is outlined below.

- “Mountain bikes are not allowed on the PCT, as per Regional Forester closure notice, August 31, 1988” (USDA, 1990a, p. 4-90).
- “In the event of conflicts between the trail (PCT) or its use, and the legislated purpose or planned objectives for these areas (i.e., developed recreation), the legislated purposes or area objectives will prevail” (USDA, 1982, p. 22).

1.3 DECISION FRAMEWORK

The USFS decision will be documented in a ROD signed by the Forest Supervisor, who may elect to accept and authorize the **Proposed Action** or alternative actions analyzed in this FEIS, or adopt the No Action Alternative. The Forest Supervisor will decide which elements of each alternative will be permitted for development. The Forest Supervisor could approve all, part, or none of each element of the Proposed Action or alternatives to it. The design of facilities, construction schedule, and other details may then be addressed by routine submission of operational plans, but the actual decision would not be revisited once it is made, unless an approved project is substantially changed. The USFS assumes no responsibility for enforcing laws, regulations, or ordinances which are under the jurisdiction of other government agencies.

1.4 SCOPE OF THE PROPOSED ACTION

This FEIS analyzes the effects of developing new and expanded winter and summer facilities at Crystal Mountain, as described in the Purpose and Need section of this chapter. Six alternative plans for development of Crystal Mountain are analyzed, including a No Action alternative. If an Action Alternative is selected in the ROD, it will serve as a MDP which will govern development of the ski resort for the next 10 to 15 years.

The scope of this FEIS is limited to the MDP components analyzed in the range of alternatives. The geographic area within which the MDP components would be located (approximately 4,488 acres) is defined as the **Project Area**. However, the scope of the environmental analysis (**Assessment Area**) varies according to the resource topic assessed.

This FEIS is not a decision document. Its primary purpose is to disclose the environmental consequences that could occur through implementation of the alternatives under consideration. Specific functions of the FEIS include:

- Provide site-specific environmental analysis for those activities and facilities proposed in the range of alternatives;
- Describe, analyze, and disclose the various biological, physical, social, and economic impacts that proposed activities and facilities would generate both on and off NFSL;
- Identify, where possible, the long-term impacts and secondary effects of the range of alternatives;
- Indicate mitigating measures which may be used to avoid or reduce impacts; and
- Provide a comprehensive, reliable document for review and evaluation by interested public agencies, groups, and individuals and for use by decision-makers as a basis for a decision.

1.5 SCOPING, SIGNIFICANT ISSUES, AND PUBLIC PARTICIPATION

The following sections present a description of the scoping process for the Crystal Mountain MDP, a summary of the public participation efforts, and the significant issues used to focus the scope of this environmental impact statement. Also, see Section 1.6, below, for a discussion of government—including Tribal Government Consultation—and interagency coordination.

1.5.1 SCOPING AND PUBLIC INVOLVEMENT PROCESS

Scoping is an integral part of the environmental analysis. Scoping includes refining the proposed action, identifying the interdisciplinary team (IDT) and the preliminary issues, and identifying interested and affected persons. The results of scoping are used to: (1) identify public involvement methods, (2) refine issues, and (3) explore alternatives to the Proposed Action and their probable environmental effects.

The IDT consisted of USFS specialists from the MBSNF, specialists from MRNP, and specialists from USFWS. The IDT is responsible for leading and developing the agency's planning and environmental compliance efforts.

An informational meeting was held at Crystal Mountain on October 17, 1998. This meeting had three purposes: (1) provide information about the Crystal Mountain MDP to the public, (2) brief the public on the process used to decide which projects in the MDP would be developed, and (3) allow the public to ask questions of the USFS and Crystal Mountain Staff regarding the MDP and the environmental analysis process.

On November 13, 1998, the USFS sent a question and answer, informational packet to those attendees who provided names and addresses. The packet contained a total of 72 questions, as posed by the public during the meeting, along with responses from the USFS and/or Crystal Mountain.

The Notice of Intent was published in the Federal Register (FR) on November 13, 1998. A letter was mailed to over 700 individuals, Tribes, and government agencies. The mailing list for this letter included those groups and individuals interested in projects on the SNOQRD, all special use permittees in the White River Drainage, those people who commented on the *Green Valley Chair Environmental Assessment* (USFS, 1998a), people requesting to be included in the scoping process, various federal and state agencies, local Tribes, Pierce County, and local communities. At the close of the scoping period on January 15, 1999, over 300 written responses (in addition to comments received prior to the scoping process) had been received.

Public involvement in this proposal has been extensive, over a time period of over four years. Additional public involvement activities included:

- Public scoping meetings on December 8, 1998 in Seattle, Washington and on December 9, 1998 in Enumclaw, Washington;
- Formal USFS correspondence with respective tribal leaders;
- Site tours by the IDT and other interested agencies;
- A project update flyer was mailed to scoping respondents, federal, state, and local agencies, and interested Tribes in April 1999;
- Public Open House on May 12, 1999 in Renton, Washington.
- The Draft EIS for the Crystal Mountain Master Development Plan was distributed to individuals, organizations, interested Tribes, and government agencies on July 20, 2001.
- The USFS solicited public input on the DEIS during a formal 75-day public comment period that ended on October 31, 2001.

1.5.2 PRELIMINARY ISSUES

The preliminary issues listed below are based upon comments received from the public and agencies during the scoping process. These issues have been consolidated from the numerous comments received (see Project files). The preliminary issues have been paraphrased as planning questions to be addressed in this EIS; how each preliminary issue was addressed, or disposed of, is also included. Note that there are numerous sub-issues and ways to address each of the preliminary issues (e.g. research needs, mitigation measures). Also, issues related to satisfying federal, state and local requirements and standards (e.g. threatened and endangered species, water quality, wetlands) that were analyzed in the environmental consequences may not appear in this list of preliminary issues.

1.5.2.1 Watershed Values

- How will the projects proposed in the Master Development Plan impact stream channel and floodplain characteristics? (*Issue carried into Significant Issues and analyzed in Section 4.2.3 – Water and Watershed Resources. See Table 4.2.3-1).*

- Will the projects proposed in the Master Development Plan alter the surface and ground water hydrology of Silver Creek subwatershed? (*Issue carried into Significant Issues and analyzed in Section 4.2.3 – Water and Watershed Resources. See Table 4.2.3-2).*
- How will the projects proposed in the Master Development Plan affect the water quality of Silver Creek and its tributaries? (*Issue carried into Significant Issues and analyzed in Section 4.2.3 – Water and Watershed Resources. See Table 4.2.3-4).*
- Is it safe to make snow with sewage effluent? (*Issue carried into Significant Issues and analyzed in Section 4.2.3 – Water and Watershed Resources. See Section 4.3.2.1 – Impact Mechanism and Table 4.2.3-2)*
- Will the proposed development impact the condition of wetlands in the ski area? (*Issue carried into Significant Issues and analyzed in Section 4.2.4 – Vegetation. See Table 4.2.4-2).*
- How will the projects proposed in the Master Development Plan impact long-term soil productivity (soil quality)? (*Issue carried into Significant Issues and analyzed in Section 4.2.2 – Geology and Soils. See Table 4.2.2-4).*
- Will implementation of the Master Development Plan affect resident and downstream fish species and/or their habitat, including those listed as threatened under the Endangered Species Act (Chinook salmon; bull trout)? (*Issue carried into Significant Issues and analyzed in Section 4.2.6 – Fisheries. See Table 4.2.6-2).*
- Will new road development be consistent with the Forest Plan (i.e. no net increase in road mileage can occur in a Key Watershed)? (*Issue carried into Significant Issues and analyzed in Section 4.2.2 – Geology and Soils, Section 4.2.3 – Water and Watershed Resources. See Table 4.2.2-1).*
- Will the use of reclaimed wastewater for snowmaking negatively affect downstream users? (*Issue carried into Significant Issues and analyzed in Section 4.2.3 – Water and Watershed Resources).*
- Does Crystal Mountain have sufficient water rights for snowmaking? (*Issue analyzed in Section 4.2.3 – Water and Watershed Resources and Section 4.3.6 – Utilities).*
- Will the projects in the Master Development Plan impact the structure and function of Riparian Reserves? (*Issue carried into Significant Issues and analyzed in Section 4.2.7 – Riparian Reserves).*
- Is the Master Development Plan consistent with the Forest Plan Aquatic Conservation Strategy Objectives? (*Issue analyzed in Section 4.2.9 – Aquatic Conservation Strategy Objectives).*
- How will the U.S. Forest Service monitor the planned mitigation? (*Issue addressed in Section 2.4 – Mitigation and 2.5 – Monitoring. Issue analyzed in Appendix D – Monitoring Framework Plan for Crystal Mountain Master Development Plan).*
- What will happen if the wastewater system fails during peak visitation? (*Issue addressed in Section 4.3.6 – Utilities and Appendix J – Revised General Sewer and Facilities Plan for Crystal Mountain Master Development Plan.*

1.5.2.2 Recreation

- How will the tram affect access to the summit for people with disabilities? (*Issue analyzed in Section 4.3.2.3 – Impacts – Alternative 2 – Non-Alpine Skiing and Recreation*).
- Is there a need for four-season resorts on the Mt. Baker-Snoqualmie National Forest? (*Issue addressed in Section 1.1.2.3 – Purpose and Need and Section 1.2.3.2 Selected Forest Plan Management Direction, By Resource – Developed Recreation*).
- Is there a need for a tram that couldn't be met with chairlifts? (*Issue addressed in Section 1.1.2.3 – Purpose and Need and analyzed in Section 4.3.2.5 – Alternative 4 – Non-Alpine Skiing Recreation, and - Alpine Skiing Recreation*).
- If growth in the ski industry is flat, why is there a need for such a large proposal? (*Issue addressed in Section 1.1.2.3 – Purpose and Need and analyzed in Section 3.3.2.4 – Alpine Skiing Analysis – National Trends, and - Washington State*)
- How will the proposal address four-season use? (*Issue addressed in Section 1.1.2.3 – Purpose and Need and analyzed in Section 4.3.2.3 – Alternative 2 – Non-Alpine Skiing Recreation, and - Alpine Skiing Recreation*).
- What studies were used to identify the potential increase in skiers at Crystal Mountain? (*Issue Addressed in Section 3.3.2 – Recreation and Section 4.3.2 – Recreation. See also Appendix B – Assumptions Used In the Recreation, Social and Economic Factors, and Transportation Analysis*).

1.5.2.3 Dispersed Recreation/Wilderness

- How will the proposed chairlifts affect dispersed recreation in the North Country, South Country and East Peak areas within the Special Use Permit boundary? (*Issue carried into Significant Issues and addressed in Section 4.3.2.3 – Recreation – Impacts - Alternative 2- Impacts to Backcountry Skiing Opportunities*).
- What effects will the proposed development have on backcountry users in the Puget Sound region? (*Issue carried into Significant Issue sand addressed in Section 4.3.2.3 – Recreation – Impacts - Alternative 2- Impacts to Backcountry Skiing Opportunities*).
- What other areas are available to backcountry skiers in the Cascades; how do they compare to East Peak? (*Issue addressed in Section 4.3.2.3 – Recreation – Impacts - Alternative 2- Impacts to Backcountry Skiing Opportunities*).
- Do projected skier population trends include growth in backcountry skiing? (*Issue Addressed in Section 3.3.2 – Recreation and Section 4.3.2 – Recreation. See also Appendix B – Assumptions Used In the Recreation, Social and Economic Factors, and Transportation Analysis*).
- How will increased use in the East Peak area affect the Norse Peak Wilderness? (*Issue carried into Significant Issues and addressed in Section 4.3.2.3 – Impacts- Alternative 2 – Non-Alpine skiing Recreation – Norse Peak Wilderness*).

- How will the increased number of year-round visitors at Crystal Mountain affect Mount Rainier National Park? *(Issue carried into Significant Issues and addressed in Section 4.3.2.3 – Impacts- Alternative 2 – Non-Alpine skiing Recreation – Mt. Rainier National Park).*
- Will single ride lift tickets be provided to expand opportunities to backcountry skiers? *(Issue addressed in Section 4.3.2.3 – Impacts- Alternative 2 – Non-Alpine skiing Recreation – Norse Peak Wilderness. See also Table 2.4-2 REC15, REC16).*
- How will the proposed East Peak chairlift affect users of the Pacific Crest Trail? *(Issue carried into Significant Issues and addressed in Section 4.3.2.3 – Impacts- Alternative 2 – Non-Alpine skiing Recreation – Recreational Use of Roads and Trails).*
- How many miles of the Pacific Crest Trail will be affected by the proposal? *(Issue carried into Significant Issues and addressed in Section 4.3.2.3 – Impacts- Alternative 2 – Non-Alpine skiing Recreation – Recreational Use of Roads and Trails. See also Section 4.3.1 – Heritage Resources and Reserved Indian Rights, and Section 4.3.3- Visual Resources).*
- Will the increased development increase use in the Mount Rainier National Park? *(Issue carried into Significant Issues and addressed in Section 4.3.2.3 – Impacts- Alternative 2 – Non-Alpine skiing Recreation – Mt. Rainier National Park, and Norse Peak Wilderness).*
- Does the proposal provide for Nordic skiing and other dispersed winter recreation activities? *(Issue addressed in Section 4.3.2.3 – Impacts- Alternative 2 – Non-Alpine skiing Recreation).*
- How will the East Peak chairlift affect the Norse Peak Wilderness? *(Issue carried into Significant Issues and addressed in Section 4.3.2.3 – Impacts- Alternative 2 – Non-Alpine skiing Recreation – Norse Peak Wilderness).*
- Will the East Peak development include rerouting the Pacific Crest Trail around the proposed chairlift? *(Issue addressed in Section 4.3.2.3 – Impacts- Alternative 2 – Non-Alpine skiing Recreation – Recreational Use of Roads and Trails).*
- Will there be conflicts with both hikers and mountain bikers using chairlifts in the summer? *(Issue addressed in Section 4.3.2.3 – Impacts- Alternative 2 – Non-Alpine skiing Recreation – Recreational Use of Roads and Trails. See also Table 2.4-2 W7, REC8).*
- Will the Bullion Basin development impact any summer horse trails? *(Issue addressed in Section 4.3.2.3 – Impacts- Alternative 2 – Non-Alpine skiing Recreation – Recreational Use of Roads and Trails).*

1.5.2.4 Scenery Management

- How will the proposed development at the ski area affect the views as seen from Mount Rainier National Park? *(Issue addressed in Section 4.3.3.2 – Visual Resources – Impacts Common to all Action Alternatives – Crystal Mountain Summit, and Section 4.3.3.3 – Impacts – Alternative 2 – Crystal Mountain Summit. See also Visual Simulations 4A and 4B).*
- How will night lighting at the ski area affect the view from Mount Rainier National Park? *(Issue addressed in Section 4.3.3.2 – Visual Resources – Impacts Common to all Action Alternatives – Ski Trail Night Lighting, and Section 4.3.3.3 – Impacts – Alternative 2 – Night Skiing).*

- How will the East Peak chairlift development affect the views of Pacific Crest Trail users? ? *(Issue addressed in Section 4.3.3.3 – Impacts – Alternative 2 – East Peak. See also Visual Simulations 5, 6 and 7).*
- How will the proposed hotel and parking lot expansion affect views from the condominiums? *(Issue addressed in Section 4.3.3.3 – Impacts – Alternative 2 – Crystal Mountain Boulevard, Parking, Base Area).*
- How will the proposed development affect the view from the Norse Peak Wilderness? *(Issue addressed in Section 4.3.3.2 – Visual Resources – Impacts Common to all Action Alternatives – Ski Trail Night Lighting).*

1.5.2.5 Wildlife

- Will the proposed development negatively affect wildlife habitat? *(Issue addressed in Section 4.2.5.4 – Wildlife – Key Wildlife Habitats and Associated Species. See also, e.g., Tables 4.2.5-1, -2, -FEIS1, -4, -5, -7, -8, -9, -10, -12, -14, and -15).*
- How will the Master Development Plan affect elk and mountain goats, particularly elk calving in the Special Use Permit Area? *(Issue addressed in Section 4.2.5.4 – Wildlife – Impacts on MBS Management Indicator Species. See also Table 2.4-2, W7, W8, W9, W10, W11, W12 and W14).*
- How will the East Peak chairlift affect mountain goats in the Norse Peak Wilderness? *(Issue addressed in Section 4.2.5.4 – Wildlife – Impacts on MBS Management Indicator Species. See also Table 2.4-2, W14).*
- How will the proposed development affect elk mortality along SR 410? *(Issue addressed in Section 4.2.5.4 – Wildlife – Impacts on MBS Management Indicator Species. See also Table 4.2.5-FEIS2 and Section 4.3.5 – Transportation).*

1.5.2.6 Air Quality

- Will the increased vehicular traffic negatively impact air quality? *(Issue addressed in Section 4.2.8 – Air Quality. See Table 4.2.8-4 and Table 4.2.8 – FEIS-1).*

1.5.2.7 Alpine Skiing

- How many sunny days are available for skiing on East Peak? *(Issue addressed in Section 4.3.2.3 – Impacts – Alternative 2 – Alpine Skiing Recreation).*
- How will increased alpine skiing at Bullion Basin affect Crystal Chalets condominium users? *(Issue addressed in Section 4.3.2.3 – Impacts – Alternative 2 – Alpine Skiing Recreation. See also Table 2.4-2, REC9).*
- The Bullion Basin chairlift was unsuccessful the first time it was installed, will it be successful this time? *(Issue addressed in Section 2.3.3.2 – Ski Trails, Section 3.3.2.4 – Alpine Skiing Analysis and Section 4.3.2.3 – Impacts – Alternative 2 – Alpine Skiing Recreation).*

- Has a regional ski area analysis been conducted to evaluate the need for expansion at Crystal Mountain? *(Issue is outside the scope of this EIS and is addressed in a letter from Dennis E. Bschor, Director of Recreation, Heritage, and Wilderness Resources, USFS to Jeffery Berman of Colorado Wild – see Section 5.0 – References).*
- Is the carrying capacity of the ski area currently being exceeded? *(Issue addressed in Section 3.3.2.4 – Alpine Skiing Analysis).*
- Does the proposed trail design consider snowboarders? *(Issue addressed in Section 1.1.1 – Background).*
- How does the proposal affect skiers by ability level? *(Issue addressed in Section 2.3.3.2 – Ski Trails).*
- Why not lengthen Chair 4 (Discovery) instead of adding the proposed Silver King chairlift? *Issue addressed in Section 1.2.2.2 – Nature of the Proposed Action, Section 1.1.2.3. – Purpose and Need, and Section 4.3.2.3 – Impacts – Alternative 2 – Alpine Skiing Recreation).*
- Will the proposed Morning Glory Express chairlift include an intermediate-level run? *(See Table 2.3.3-2 and Figure 2.3.3-1 _ Alternative 2 – Proposed Conditions).*
- Will there be capacity problems with the intermediate runs from the top (Lucky Shot and Iceberg Gulch) with the increase in skiers? *(Issue addressed in Section 4.3.2.3 – Impacts – Alternative 2 – Alpine Skiing Recreation).*

1.5.2.8 Transportation

- What effects will the proposed expansion have on traffic in Enumclaw, Buckley, Bonney Lake and Greenwater? *(Issue addressed in Section 4.3.5 – Transportation. See also Table 4.3.5 – FEIS-1, Table 4.3.5-4, Table 4.3.5-5 and Table 4.3.5 – FEIS 2).*
- How will Highway 410 and Crystal Mountain Boulevard handle the increase in traffic resulting from the proposed expansion? *(Issue addressed in Section 4.3.5.3 – Impacts – Alternative 2 – Winter/Summer Peak Volumes. See also Table 4.3.5 – FEIS-1, Table 4.3.5-4, Table 4.3.5-5).*
- Will Crystal Mountain’s proposal include an upgrade of Crystal Mountain Boulevard and bus shuttles/park ‘n ride from Enumclaw? *(Issue addressed in Appendix A – Alternatives Considered and Modifications to the Crystal Mountain Master Development Plan).*
- Will the development include a parking garage in Parking Lot B? *(Issue addressed in Section 2.3.6.4 - Alternative 5 – Parking, and Section 2.3.7.4 – Alternative 6 – Parking).*
- Does the development plan include a separate lane for shuttles? *(Issue addressed in Appendix A – Alternatives Considered and Modifications to the Crystal Mountain Master Development Plan).*

1.5.2.9 Socioeconomics

- Will the increased use at Crystal Mountain necessitate additional emergency services in the nearby communities? (*Issue addressed in Section 4.3.4.3 – Impacts Common to All Action Alternatives – Public Services*).
- What are the economic effects of the Proposed Action? (*Issue addressed in Section 4.3.4 – Social and Economic Factors. See Tables 4.3.4-1 through 4.3.4-5*).
- How will the expansion affect lift ticket prices? (*Issue addressed in Section 4.3.4.3 – Impacts Common to All Action Alternatives – Spending and Economic Characteristics*).
- Will poor snow quality prevent additional visitors, despite the improvements? (*Issue addressed in Section 3.3.2 – Recreation. See Tables 3.3.2 – FEIS 1 and 3.3.2 FEIS-2*).
- How much will the condominium owners have to pay for the new sewage treatment facility? (*Issue addressed in Section 4.3.6 – Utilities. See Tables 4.3.6-4 and 4.3.6-9*).
- What effects will the proposed lodging have on the ability to rent condominium space? (*Issue addressed in Section 4.3.4.3 – Impacts Common to All Action Alternatives – Spending and Economic Characteristics*).
- How much revenue is lost from skiers leaving Washington State? (*Issue addressed in Section 3.3.2.4 – Alpine skiing Analysis – Competitive Position of Crystal Mountain*).
- How will the East Peak development affect outfitter guides? (*Issue addressed in Section 4.3.2.3 – Impacts – Alternative 2 – Non-Alpine Skiing Recreation*).
- What economic effects will Crystal Mountain see based on the expansion, particularly the increased summer use? (*Issue addressed in Section 4.3.4 – Social and Economic Factors. See Tables 4.3.4-1 through 4.3.4-5*).

1.5.2.10 Safety

- How will avalanche control affect the condominium and ski club users? (*Issue addressed in Section 4.2.1 – Climate and Snow Conditions and Section 4.3.2 – Recreation*).
- Are the ski trails proposed on steeper slopes wide enough to provide safe skiing? (*Issue addressed in Section 2.3.1 – Assumptions Common to all Action Alternatives. See Table 2-3-1-1*).
- How will avalanche control affect backcountry skiers? (*Issue addressed in Section 4.3.2.3 – Impacts – Alternative 2 – Non-Alpine skiing Recreation – Impacts to Backcountry Skiing Opportunities*).
- Will East Peak development increase avalanche potential? (*Issue addressed in Section 4.2.1 – Climate and Snow Conditions and 4.3.2.3 – Impacts – Alternative 2 – Non-Alpine skiing Recreation – Impacts to Backcountry Skiing Opportunities*).
- Will the proposed Pika surface lift cross the existing egress route from Skid Road to Alpine Inn? (*See Figure 2.3.7 – 2*).

- Will proposed RV camping be close to the base area for safe access? (*Issue addressed in Section 2.3.3.8 – Other Recreational Opportunities – Recreational Vehicle Camping*).

1.5.3 SIGNIFICANT ISSUES

NEPA requires federal agencies to focus analysis and documentation on the significant issues related to a Proposed Action. The significant issues serve primarily as the basis for developing and comparing alternatives; they were developed considering the comments of interested and affected agencies, Tribes, organizations, individuals, field reconnaissance, agency resource maps and Interdisciplinary Team review of the proposal. The significant issues were approved by the responsible official. Note that while this FEIS focuses on these significant issues, all issues identified through scoping were considered in the various resource analyses. The following issue statements include some background discussion, and the indicators, or key measures that will be used in comparing how the alternatives address each issue.

1.5.3.1 Scenery Management

Issue: Proposed development may affect the scenic quality of the area.

Background: The proposed expansion of the Summit House restaurant; construction of the Silver King chairlift; and construction of the Summit Retreat center may negatively affect the view of the area as seen from MRNP. Construction of the East Peak chairlift may affect the visual quality to users of the PCT. The visual quality of the base area may be affected by the development of facilities in the base area, including the proposed hotel, as well as development of ski trails near the base.

Indicators: Development of architectural renderings of facilities and development of perspective plots of the proposed projects from key locations to assist in determination of the effects on visual quality.

1.5.3.2 Wilderness

Issue: Proposed construction of the East Peak and Silver King chairlifts along with the construction of the tram may increase use in NPW and MRNP.

Background: This construction may increase use in these Wilderness areas in the winter thereby impacting the wilderness experience. The increased use may also increase the number of search and rescues that are carried out in MRNP and Wilderness resulting in increased expenses for MRNP. Increased summer use resulting from the Tram may increase use in MRNP. This increase in use may result in the several LAC standards being exceeded.

Indicators: Narrative description of the estimated increase in use in the Wilderness areas, description of the effects on wilderness experience, and the number of potential rescues.

1.5.3.3 Dispersed Recreation

Issue: Development of chairlifts in the East Peak, South Country, and North Country areas may negatively affect the existing dispersed recreation use in those areas.

Background: Development of the East Peak chairlift would bring alpine skiers to an area that hasn't been skied previously by alpine skiers. It is an area that is currently used by dispersed winter recreationists (snowshoers, backcountry skiers, etc.). It also provides access to several areas used by dispersed winter recreation users. Development of a chairlift in this area would increase the number of skiers in the area. The increased use may affect the experience of the current users.

Skiers who currently use the North and South Country areas usually ride chairlifts to the ridge top to hike in and traverse to those areas. The proposed development of chairlifts in the North and South Country would increase use in these areas, which may change the experience of users; the areas would be more crowded and the snow would become skied out and moguled more quickly.

The East Peak chairlift would cross the PCT. The construction of this chair may effect the users, changing their PCT trail experience as they encounter another developed facility along the trail. There is also a concern that the presence of the chair could frighten horses, possibly resulting in injuries to both horses and riders.

Indicators: Narrative description of effects and estimated increase of skiers in the areas.

1.5.3.4 Stream Channels and Floodplains

Issue: Potential exists for proposed projects to impact stream channel and floodplain characteristics.

Background: The *Silver Creek Watershed Condition Assessment* (Jones & Stokes Associates, 1997) documented that historical use/management in the Silver Creek watershed has resulted in (1) deteriorated channel conditions in several stream channel types throughout the analysis area, and (2) alterations to the floodplain characteristics within the analysis area. The clearing and soil disturbance associated with the proposed projects may affect the channel conditions and floodplain characteristics. The effects of these activities may affect water quality and fisheries habitat.

Indicators: Description of effects on the length of bank erosion, channel geometry (width/depth ratio, etc.), changes in discharge, Large Woody Debris (LWD) recruitment potential, instream LWD, condition of riparian vegetation, substrate composition, floodplain connectivity, and types and extent of floodplain modifications.

1.5.3.5 Soil Quality

Issue: The proposed project has the potential to impact long-term soil productivity (soil quality) through physical disturbances and changes in organic matter levels.

Background: The *Silver Creek Watershed Condition Assessment* (Jones & Stokes Associates, 1997) and soil surveys conducted within the permit area document the existence of highly erodible soils. This assessment also identified areas in which soil erosion was occurring. There is development of ski trails proposed in these areas which could disturb these soils. This disturbance may affect the long-term soil productivity in the area.

Indicators: Description of effects by alternatives on the potential for increasing erosion in erodible soils and areas already eroding. Identification of areas where alternatives will create conditions with more than 20 percent of the area in a detrimental soil condition. Identification of the road density and road/stream intersection with the various alternatives. Description of the potential for eroded material to be delivered to stream channels.

1.5.3.6 Water Quantity and Quality

Issue: The proposed project has the potential to alter stream/groundwater discharge along with the potential to alter water quality.

Background: The *Silver Creek Watershed Condition Assessment* (Jones & Stokes Associates, 1997) documented that future development of the Upper Silver Creek watershed by the ski area may require augmentation of current surface water supply sources by deep groundwater source development. The clearing and soil disturbance associated with the proposed projects may affect the flow in Silver Creek and other drainages in the ski area. The development of wells for consumptive uses and snowmaking may also affect the stream and groundwater discharge. This additional development may affect the quantity and quality available for fish and downstream users.

The *Silver Creek Watershed Condition Assessment* (Jones & Stokes Associates, 1997) documented several existing and potential water quality problems. The Upper White River watershed is listed (303d) for noncompliance with fecal coliform standards. Elevated turbidity levels were noted in several locations. Fecal coliform levels were sufficient to warrant a watch and see situation. Oil and/or grease were also detected in several samples. Water temperature could prove to be a problem in some locations, especially highland lakes. The proposed ski trail clearing, parking lot development, and other construction projects could affect the turbidity of Silver Creek. The proposed increase in CCC and number of vehicles could affect the amount of oil/grease in Silver Creek.

Indicators: Description of changes in peak/base flows and changes in drainage network. Description of effects on vegetation in hydrologic maturity and road density on peak/base flows. Description of alternatives effects on ambient stream temperatures, turbidity, fecal coliform bacteria, nitrates, total phosphorus, petroleum products, and changes in water temperature.

1.5.3.7 Fisheries

Issue: The proposed project has the potential to impact fish species and their habitat.

Background: The *Silver Creek Watershed Conditions Assessment* (Jones & Stokes Associates, 1997) documented existing fish populations within Silver Creek, including brook trout, rainbow trout, cutthroat trout, and Coho salmon. The Silver Creek assessment documented various alterations to fish habitat, including passage (e.g. culverts). These alterations are believed to be the result of past natural disturbance (e.g. fire and mass failures), along with human activities such as logging, mining, and ski area development. Development of ski trails, base area facilities and parking lots may affect the fish species and their habitat.

Indicators: Description of effects by alternative on habitat connectivity and habitat (substrate embeddedness, quantity and distribution of LWD, pool frequency and quality, amount of cover and cover type, and macroinvertebrate abundance and richness).

1.5.3.8 Riparian Reserves

Issue: The proposed project has the potential to affect the amount and function of RRs within the ski area.

Background: The RRs within the Silver Creek watershed have been altered through natural processes (e.g. fire) as well as management influences (e.g. logging, mining, and ski area development). Other than areas permanently altered through ski area development and past timber harvest activity, most riparian areas are recovering their natural function. The proposed ski trail, base area and parking lot development may affect the amount and functionality of RRs within the ski area.

Indicators: Description of the effects of the alternatives on the following Riparian Reserve characteristics, including: (1) changes in the composition of vegetation within riparian areas resulting from alternatives, (2) changes in LWD currently within stream channels as well as LWD recruitment potential, (3) changes in stream shading, and (4) fragmentation and associated impacts on riparian dependent species (abundance and diversity).

1.5.3.9 Heritage Resources, Treaty Rights, and Privileges

Issue: The chairlift development, ski trail clearing, and increased summer and winter use¹² that would potentially occur under the Proposed Action may affect historical and traditional cultural places of importance to the Muckleshoot Tribe. Also, the vegetation removal in the Proposed Action may affect the exercise of hunting, fishing, and gathering rights.

Background: Heritage resource surveys conducted in 1989 indicated areas of high potential for heritage resources. The Muckleshoot Indian Tribe indicated a possibility of traditional cultural places being present in the area.

The analysis area is an elk calving area, as a result, proposed vegetation removal in the North Country area may affect the exercise of treaty reserved hunting privileges through the reduction

¹² The Crystal Mountain DEIS did not include increased summer and winter use as an issue, increased use developed as an issue between the release of the DEIS and the publication of the FEIS.

of elk populations. The area is within adjudicated usual and accustomed grounds and stations of the Muckleshoot, Yakama, and Puyallup Tribes.

Indicators: Description of information gathered in resource surveys and/or ethnographic surveys along with narrative description of effects of projects on habitat and populations.

1.5.4 OTHER ISSUES

These issues did not “drive:” the development of a specific alternative (or design elements in an alternative), as did the Significant Issues; however, they were still considered important and were addressed in the analysis of effects of the alternatives.

1.5.4.1 Transportation

Issue: Development of the proposed master plan would increase the amount of traffic on Highway 410 and Crystal Mountain Boulevard.

Background: There is a concern the proposed increase in visitation would generate increased traffic on Highway 410 and Crystal Mountain Boulevard, resulting in traffic jams and increasing the amount of time it takes people to travel to and from Crystal Mountain.

Indicators: Traffic surveys/counts narrative description of the capabilities of the roads and effects on travel time.

1.5.4.2 Adjacent Communities

Issue: Implementation of the Proposed Action may affect areas/communities outside NFSL.

Background: The increased capacity proposed in the MDP may result in increased traffic and use in communities along the route to Crystal Mountain (Greenwater, Enumclaw, Buckley, and Bonney Lake). This increase in traffic and use may affect the emergency services, criminal activity, traffic, and business of these communities.

Indicators: Narrative description of the anticipated effects upon the affected communities.

1.5.4.3 Air Quality

Issue: Development of the proposed MDP may affect Air Quality.

Background: The increased number of vehicles may affect the air quality in the Silver Creek Valley. The proposed development may result in visual impairment in Adjacent Class I airsheds, including MRNP.

Indicators: Through use of models, describe the effects on air quality.

1.5.4.4 Wildlife Habitat and Wildlife Disturbance

Issue: The abundance, distribution, structure, and function of habitat for the identified wildlife species may be altered as a result of the proposed ski area projects. Also, the proposed, increased year-round recreation use may affect wildlife use of the area.

Background: Potentially suitable habitat for the identified wildlife species may occur within the permit area. Habitat types include late successional, snags, LWD, riparian, cliff, talus, and non-forested. These habitat types may constitute an entire home range for some species or provide connectivity between habitat patches for others. Maintaining an adequate amount and distribution of habitat is essential to the viability of species found in the permit area. Development of ski trails and chairlifts may reduce the functionality of wildlife habitat for various wildlife species.

Several species of wildlife that use the area are sensitive to human presence or are nocturnal. The increased CCC proposed in the MDP may cause some species to avoid areas utilized by humans. Also, the increased amount of area illuminated by night lighting may impact use of the permit area by nocturnal species.

Indicators: Identification of the amount of habitat altered by the alternatives. Description of the remaining amount of connecting habitat for wide ranging species and the amount and quality of large patches of suitable habitat for low mobility species. Identification of areas where human use is expected to increase and an estimate of the effects of the increased use on wildlife. Identification of areas of expanded night lighting and a description of the anticipated effects on wildlife.

1.6 GOVERNMENT AND INTERAGENCY COORDINATION

1.6.1 TRIBAL GOVERNMENT CONSULTATION

The federal government has a permanent legal obligation to American Indian tribes, which comes from commitments made by the United States in treaties, executive orders, and agreements. For the USFS, trust responsibilities are essentially those duties that relate to the reserved rights and privileges of federally recognized Indian tribes as found in treaties, executive orders, laws, and court decisions that apply to the national forests and grasslands. For USFS activities, the trust responsibilities are defined primarily by the authorities listed in FSM 1563.01 and by treaties that apply to specific areas of the NFSL. Treaty rights on NFSL are interpreted and applied by the court.

As part of the NEPA process, the USFS is required to conduct Government-to-Government consultation with all federally recognized Indian Tribes that could be affected by the proposed project. The USFS consultation process for cultural and heritage resources is designed to comply with Section 106 of the National Historic Preservation Act (NHPA), the American Indian Religious Freedom Act, the Native American Graves Protection and Repatriation Act, and the Archaeological Resources Protection Act (ARPA). Based on information from the Indian Claims Commission findings and on the BIA interpretation of the district court's specified findings in United States v. Washington on Tribes' usual and accustomed fishing places, regarding tribal

territorial boundaries at the time of treaty negotiations in the 1850s, the Muckleshoot Indian Tribe (MIT), Puyallup Tribe, and Yakama Indian Nation (YIN) were identified as the concerned Tribes. On September 23, 1998, the USFS extended an invitation for the MIT, Puyallup Tribe, YIN, and the Nisqually Indian Community to visit the Crystal Mountain Ski Area and review and discuss the proposed MDP. Additionally, the USFS notified these tribes about the Crystal MDP project on November 20, 1998 in a formal letter from the Forest Supervisor and asked each for input on issues of concern, including heritage resources. On April 26, 1999, the USFS sent certified letters to the MIT, Puyallup Tribe, and the YIN to notify them that an ARPA permit was going to be issued to Northwest Archaeological Associates (NWAA) and invited them to a meeting to discuss any tribal concerns regarding the ARPA permit or portions of the Crystal Mountain MDP. The MIT, Puyallup Tribe, and the YIN were provided with copies of the Crystal Mountain DEIS for comment on July 20, 2001.

The YIN did not comment on the scoping letter sent by the USFS on November 20, 1998. The USFS contacted the YIN on March 12, 1999 with a follow up phone call to solicit any concerns that the tribe had regarding the Crystal Mountain MDP. Johnson Meninick of the YIN indicated that the YIN would like to be kept informed of the project's progress and sent copies of the EIS documents. They submitted no specific information on ethnohistoric use of the project area and did not convey any specific comments on the scope of the project or the DEIS.

The Puyallup Tribe did not comment on the scoping letter sent by the USFS on November 20, 1998. The USFS contacted the Puyallup Tribe on February 24, 1999 with follow up phone calls to solicit any concerns that the tribe had regarding the Crystal Mountain MDP. Joe Edgell, Environmental Council for the Puyallup Tribe, returned the call and stated that the Tribe had not prepared specific comments to the Crystal Mountain MDP, but indicated that he would keep the Tribal Council informed of the project. On January 19, 2002, the Puyallup Tribe contacted the USFS to submit comments on the DEIS and to request that more information on Puyallup Tribal interests in the project area be included in the EIS. The letter provided additional information on the prehistory of the north Mt. Rainier National Park area and on ethnohistoric use of the upper White River valley, Naches Pass, and Naches Trail by upper Puyallup people. The USFS sent a letter to The Puyallup Tribe on April 2, 2002 to invite the Tribe to a government to government meeting to discuss their interest on the Crystal Mountain MDP. The USFS and Tribal technical staffs met on May 28, 2002, to discuss the Crystal Mountain MDP.

Most Tribal consultation during the NEPA process was conducted with the MIT, who informed the USFS of their interest in the project and requested to be a consulting party in the NHPA process on December 15, 1998. The proposed action and alternatives were presented to the Tribe in a meeting held on March 31, 1999. On May 26, 1999, a Scope of Work for an Ethnographic Study contract was presented to the MIT Hunting and Culture Committee. A field trip to Crystal Mountain by members of the MIT, USFS, and Crystal Mountain staff took place on July 30, 1999 for the purpose of showing the Tribe some of the MDP project locations. On April 6, 2000, the USFS met with the MIT Culture Committee to discuss Tribal issues, including the Area of Potential Effects, trails, fish, and wildlife. Other communications with the MIT took place in 2000 including a Government-to-Government meeting on September 19 to discuss the range of projects proposed by the MDP as well as tribal interests.

The USFS met with the MIT on a Government-to-Government basis on May 14, 2001 to answer questions and address Tribal interests regarding the SUP and the MDP. At that meeting the USFS received the final Agency copy of the Ethnographic Study from the MIT on May 13, 2001. Several letters and meetings between the USFS and MIT took place in October, November, and December, 2001 to discuss resource-specific issues and potential mitigation measures. During the November 6 meeting, the presentation of TCP/TCHR information for Section 106 consultation, treaty resources, development of a Memorandum of Agreement for historic properties, and other heritage resource issues were discussed.

Further meetings between the USFS and members and staff of the MIT took place in February, March, April, May, June, and July 2002. Mitigation measures and other strategies developed by the USFS to address issues of Tribal concern in the White River valley were presented to the MIT on April 24. The Tribe was asked to review the proposed measures and identify any others they felt to be appropriate within the timeline for completion of the EIS. Also during this meeting, the Tribe presented a number of potential mitigation measures and discussed Tribal issues with the project. On June 3, the USFS and MIT met and discussed the results of an ethnographic study addendum report on the Silver Creek Trail (Lewarch et al., 2002) and additional fieldwork to identify and evaluate remaining trail segments. Also discussed were the Cascade Crest Trail and water quality and access restrictions related to a spiritual bathing area. The USFS met with the MIT on June 17 to determine whether the Tribe had identified additional mitigation measures, and sent a letter to the Tribe on July 18 requesting that any additional measures be received by the end of that month so that they could be included in the EIS. Additional field work on the Silver Creek Trail was completed by NWAA and an addendum report on the survey of the Silver Creek Trail was submitted to the USFS on November 3, 2002 (Nelson, 2002). The USFS sent a letter to the MIT Wildlife and Cultural Resource Programs on December 24, 2002 advising the Tribe of some of the decisions to be made, along with asking for mitigation measures for the Silver Creek Trail by January 22, 2003. A table of mitigation measures for the MDP previously developed to address Tribal concerns was included.

A meeting was held on April 23, 2003, at which the MIT discussed mitigation measures proposed by the USFS as well as additional measures they wanted considered. The Tribe requested that an agreement document (Programmatic Agreement) be prepared to fulfill the USFS responsibilities under Section 106 of the NHPA. On May 9, 2003, a draft agreement was sent to the MIT, SHPO, ACHP, Crystal Mountain, the Puyallup Tribe and the YIN for review.

The MIT responded to the Forest Service with comments to the draft on June 17, 2003, and to the SHPO with further comments on July 31, 2003. Comments were incorporated into the final agreement executed between the Forest Service and SHPO on September 9, 2003.

The MIT reviewed a draft copy of the FEIS in March-April of 2004, and suggested additional mitigation measures. The Forest Service incorporated these additions in Tables 2.4-2 and 2.4-3 of the FEIS.

1.6.2 INTERAGENCY COORDINATION AND CONSULTATION

Under NEPA regulations, any agency, other than the lead agency, that has jurisdiction or special expertise relative to a Proposed Action is to be a cooperating agency in the NEPA process, at the

request of the lead agency. Any such agency may also request to be designated as a cooperating agency. The USFS did not make any such requests of agencies for this FEIS.

The NPS, MRNP requested and was granted official status as a cooperating agency in the NEPA process. No other agency requested such status. The U.S. Army Corps of Engineers (USACE) field-reviewed the Crystal Mountain MDP proposal on October 18, 1998 and held a pre-application meeting on October 21, 1998. As a result of this coordination, the USACE indicated that they would not request cooperating agency status.

Two other federal agencies, the USFWS and NMFS, have participated in the Crystal Mountain MDP process to date. After the completion of the scoping process and formulation of alternatives, the U. S. Environmental Protection Agency (USEPA) expressed an interest in taking an active role in the NEPA process. The roles of these agencies are summarized below.

1.6.2.1 U.S. Fish and Wildlife Service

The USFWS has ESA jurisdiction over non-marine fish, wildlife and plant species, such as the northern spotted owl, Canada lynx, and marbled murrelet, that are listed or proposed for listing as threatened or endangered. The USFS must consult with USFWS concerning the effects of proposed USFS actions on listed species and species proposed for listing under USFWS jurisdiction. Because endangered species concerns will be significant issues for the MDP FEIS, the USFWS is a key participant in the NEPA process.

The USFWS will be involved in reviewing activities and technical contributions as well as participating in ESA functions. USFWS participation includes, but is not limited to the following specific activities:

- Review and comment on the MDP proposal;
- Participation in IDT trips and IDT Meetings;
- Review and comment on the draft study plan;
- Provide technical advice on any field surveys for listed species, and on data collection and analysis for subjects within USFWS expertise;
- Review and comment on the DEIS;
- Review the BA prepared by the USFS on the MDP Preferred Alternative, and provide a Biological Opinion (BO) or Letter of Concurrence in response;
- Review and comment on drafts of the Final EIS (FEIS).

1.6.2.2 National Oceanic and Atmospheric Administration - Fisheries

NOAA – Fisheries has ESA jurisdiction over marine species, such as anadromous fish. The Chinook salmon has been listed as threatened and can be found in an area downstream of Crystal Mountain. As a result, the USFS is consulting with NOAA Fisheries under the ESA for this

project. The USFS will prepare a BA on the subject species and receive a BO or Letter of Concurrence from NOAA - Fisheries in return.

1.6.2.3 U.S. Environmental Protection Agency

The USEPA has national jurisdiction over water quality through the Clean Water Act. While specific responsibility for water quality programs in Washington has been delegated to the WDOE, the USEPA maintains an active review role over regulatory activities and NEPA documents. The USEPA will provide oversight in the preparation of NEPA documentation for the Crystal Mountain MDP.

1.7 PERMITS, APPROVALS, AND CONSULTATION REQUIRED

Many federal, state, and county laws and regulations affect development, land use, and operation of Crystal Mountain. Crystal Mountain is currently under a SUP from the MBSNF, which authorizes the occupancy and use of the NFSL. Crystal Mountain is required by its SUP to comply with all present and future state and local laws, ordinances, and regulations applicable to the area of its operations to the extent that they are not in conflict with federal law or policy. The USFS assumes no responsibility for enforcing laws, regulations, or ordinances that are under the jurisdiction of other governmental agencies. Crystal Mountain must obtain all other required permits during design, development, and prior to expansion. Permits that may be required, among others, are outlined in Table 1.7-1.

Table 1.7-1
Summary of Permits, Approvals, and Consultation for the Crystal Mountain MDP

Agency	Action/Regulation	Description of Permit/Action
Federal:		
U.S. Army Corps of Engineers (USACE)	USACE Permit under Section 404 of the Clean Water Act (USC 1344)	Authorization for discharge of dredged/fill material into wetlands and other waters of the U.S.
Environmental Protection Agency (USEPA)	Clean Air Act, as Amended, 42 USC Section 7410-762 (PL 95-604, PL 95-95)	Provide review and comments on the federal action.
	Federal Water Pollution Control Act, as Amended by the Clean Water Act (USC 1344)	Provide information and technical assistance in the environmental analysis.
	Safe Drinking Water Act, 452 USC Section 300F-300J-10 (PL 93-523)	Stormwater Permit for stormwater discharges at construction sites.
U. S. Fish and Wildlife Service (USFWS)	Section 7 Consultation and Biological Opinion	Protection of Threatened and Endangered Species.
National Oceanic and Atmospheric Administration (NOAA) – Fisheries	USACE Section 404 Permit Consultation	Consultation under the Fish and Wildlife Coordination Act.
	Section 7 Consultation and Letter of Concurrence	Protection of Threatened and Endangered Species.
State:		
Washington Department of Ecology (WDOE)	Water Quality Certification (Clean Water Act Section 401)	State approval to USACE for discharge to surface waters
	Permit to Withdraw or Divert Surface or Ground Water	Authorize withdrawal of surface or groundwater.
	Waste Discharge Permit – Reclaimed Water (in conjunction with Department of Health)	Authorize the application of reuse water in the snowmaking process.
	Change of a Water Right	Changing an existing water right, certificate, or claim.
Washington Department of Fish and Wildlife (WDFW)	Hydraulic Project Approval	Authorize development activities within waters of the U.S..
Washington State Office of Archaeology and Historic Preservation	Section 106 of the National Historic Preservation Act	Determination of effects to Cultural/ethnic resources
Local:		
Pierce County Code Compliance	Building Permit	Authorize construction of buildings, wastewater treatment facilities.
	Land Disturbance Permit	Authorize land disturbance activities in the CMB right-of-way.
Other:		
Muckleshoot Tribe	Ethnographic Survey Coordination	Coordinate with the Muckleshoot Tribe in the completion of an ethnographic survey consistent with the National Historic Preservation Act.